



Spies Hecker.
Paint systems for generations.



Spies Hecker – simply closer.





TELEGR.-ADRESSE:

SPIES HECKER KÖLN.

TELEPHON N^o 827.

LONDON :

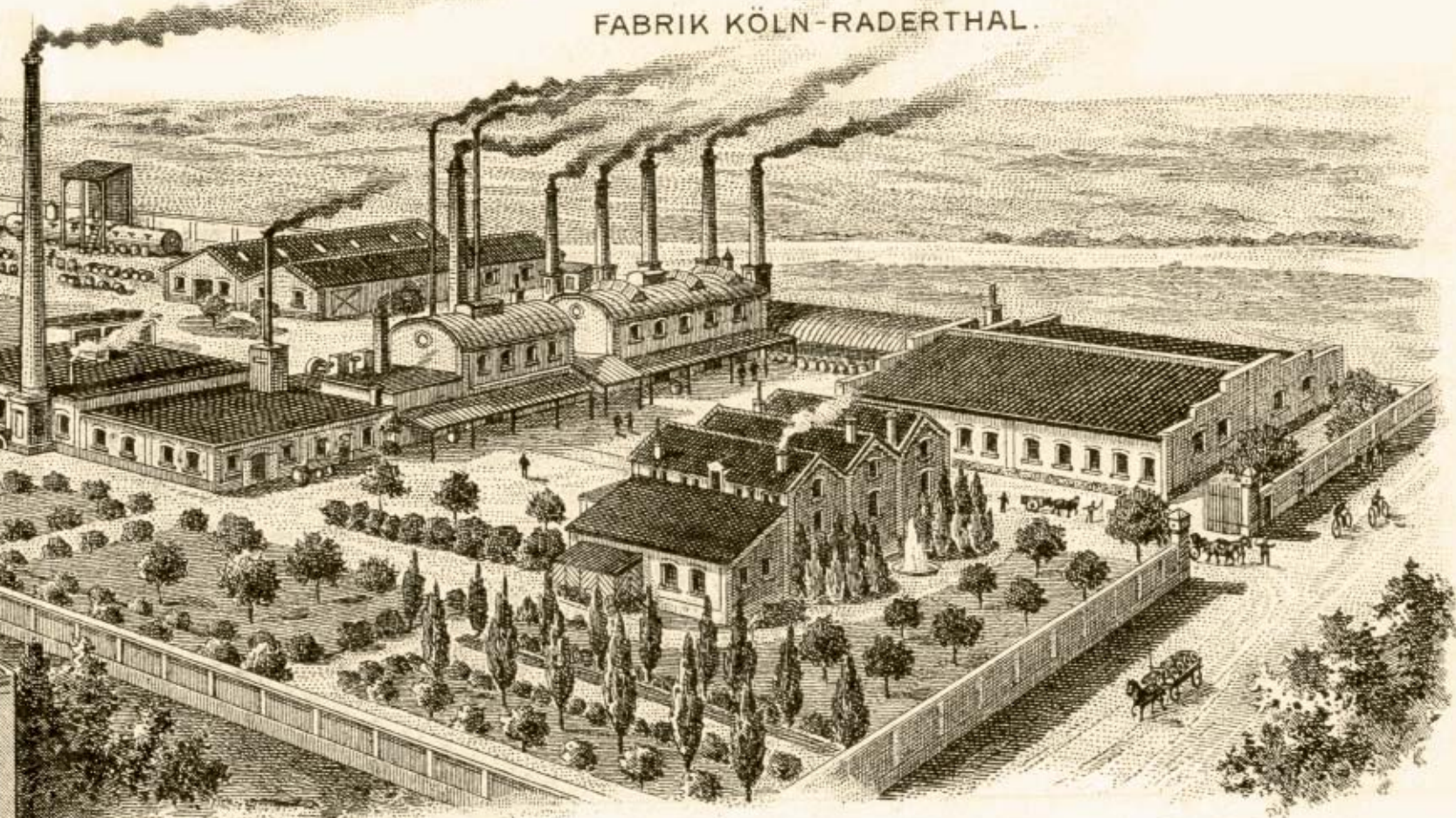
SPIES BROTHERS & C^o.

102 FENCHURCH STREET E.C.



GESCHÄFTSHAUS KÖLN, MECHTILDISSTR. 4.

FABRIK KÖLN-RADERTHAL.



ANGLO CONTINENTAL VARNISH CO

SPIES, HECKER & CO

LACK-FABRIK

Family and company history.
Spies Hecker 1882 - 1945.



■ *Family photograph of the Heckers, ca. 1910.*

■ *Adolf Friedrich Hecker.*

Businessman Adolf Friedrich Hecker turns paint manufacturer.

■ Colours have fascinated mankind since ancient times. Over 10,000 years ago, our ancestors decorated their caves with paintings. Scholars like Isaac Newton and the German poet and privy councillor Johann Wolfgang von Goethe spent decades investigating the physical principles of the colour spectrum. However, when Goethe harnessed his horses and set off on his travels, he did not consider who had made the paint, how it has been applied to his carriage and why it was so hard-wearing.

The art of the vehicle paint industry was in its infancy and relatively unknown to the university educated Goethe. It was in June 1863, however, that a master in the art of colour, Adolf Friedrich Hecker, began his success story. Cars had not yet been invented, but the first underground railway was already running in London and the British capital was to play a major part in Adolf Hecker's life ...

Travelling from Thuringia, the wealthy businessman set off with his wife Christine on a journey to

Cologne. At the young age of 23, Adolf Hecker, born 4th March 1840, was already a businessman of the old school: respectable, honest, conscientious and loyal, attributes that are still valued at Spies Hecker today. The couple travelled to Cologne by train and, crossing the first permanent railway bridge from Deutz across the Rhine, may well have enjoyed the marvellous view of the cathedral that was on the verge of completion after 600 years of construction. Adolf Hecker was coming to Cologne to seek his fortune!

In the middle of the 19th century, Cologne was of great importance as a trading centre in handling goods from Britain, Scandinavia, and Eastern and Southern Europe. The economy in the Rhineland was booming, attributable to the repatriation that France had to pay after losing the Franco-Prussian War in 1870/1871.

Adolf Hecker and his wife settled in the Severin Quarter (“Vringsveedel”) where they found suitable premises for their first hardware store. Shortly after arriving, Adolf Hecker traded with Bohemian graphite. Success did not come easily for him as he lost half of his invested capital within the first five years of business, evidence of which is painfully recorded in his ‘memoirs’. Other businessmen may have cut their losses and run, bidding farewell to Cologne, but not Adolf Hecker – on the contrary!

Adolf Hecker had seen a property in what was then distant Raderthal. This was where two of his neighbours, Koch and Burmann from the Severin-strasse, who were traders in materials, ran a small factory for the production of asphalt paint. At the time, Raderthal was not exactly a popular place to live and work. Fritz Hecker Sr. described the area as follows: “It was a relatively poor area known locally as ‘Krüffesjen’, with 15 to 20 mainly primi-



■ Paint boiling staff at the beginning of the 20th century.

■ *First trade mark with the letters: A = Anglo, C = Continental, V = Varnish, C = Company.*

tive houses with 3 x 3 metre rooms, steeply pitched gabled roofs and crooked attics. Raderthal was popularly known as 'Räuberthal' (Robbers' Vale). It belonged to the district of Rondorf (...). In those days, all the suburbs of Cologne, which were areas outside of the city walls, were still independent districts. Trouble was always brewing between these outer districts and the city, and this was highlighted in the mockery shown at the Carnival processions. Many farmers, known as 'Kappesbure', lived in and around Radeberger Strasse and Hitzlerstrasse as far as Bonner Strasse, and most of them were wealthy people.

On a level with Brühler Strasse, where the country road dropped steeply downhill, there was a mansion in the style of a villa belonging to the Guilleaume family. Two batchelor brothers lived there who founded the well-known company Felten & Guilleaume, and in one of the main buildings of the Kotthoff paint factory the brothers ran a highly profitable noodle factory."

The term "factory" may well have been an exaggeration, as Adolf Hecker's youngest son Fritz describes in his memoirs: "I can remember this little factory: surrounded by a wall of boards, with a relatively large, brick-faced boiler under the open sky and a melting room with a fire pot and a small, bulbous, beaten copper melting pot." For Adolf Hecker's purposes, these premises proved to be sufficient. He took the entire factory on a lease in 1875 and purchased it one year later. The raw materials required for paint production were stored in his garden. His second-eldest son Alfred Hecker, who made a career as the technical director of various paper mills at home and abroad, describes



this in a letter to his younger brother Fritz: "At about the same time, the small paint store in Severinstrasse had been built in the garden. At the rear of the store were the storage vats of copal and asphalt paints from which cans were filled for shipment. The cans were stored on top, and this is where the copal was sorted too. Every few weeks a cart was loaded up with copal, linseed and turpentine oil along with onions and black bread. The last two items were needed for boiling varnish. Approximately 15 pounds of copal were melted in bulbous copper boilers."

Copal is a semi-fossil, natural tree resin which contains hard properties and has a higher melting point than fresh resins, but "onions and black bread" – what was food doing in the boiler of a paint factory? Fritz Hecker Sr. explains the mystery in his memoirs: "When the linseed oil was heated, onions and bread were added, and when these turned pitch black it was apparent that the linseed oil had been boiled long enough. In those days there were no thermometers to read high temperatures."

After initially making paint as a side line, Adolf Hecker finally devoted himself entirely to his new passion. He purchased a small pitch works that belonged to the Herbig and Haarhaus families – who were also originally from Severinstrasse. The licence for a paint factory was tied to a property diagonally opposite the asphalt factory of Koch and Burmann in Raderthal, and Adolf Hecker had set his sights on this building. Regrettably, conditions were not the best. As Fritz Hecker Sr. recounted, "Paint factories ranked roughly alongside explosives factories. The reason for this was the flammability of the vapours given off during the melting

of copal. Since these vapours were heavier than air, they not only settled on the vegetables in the surrounding fields, but also wafted into houses and many farms. The vapours were extremely unpleasant and irritated the nose and lungs. A special licence was therefore required for each planned extension to the factory. This had to pass through the Municipal Committee of the City of Cologne and had to be announced in the newspaper many times before the licence could be granted. The licence was also subject to an objection period of several weeks. Each announcement stirred the entire neighbourhood into action from as far away as Brühler Strasse and Bonner Strasse. Protest petitions went from house to house. Adolf Hecker, the company founder, had a tough fight on his hands. Every time he wanted to build a new factory facility, he was prompted to lodge appeals with the Ministry in Berlin.”

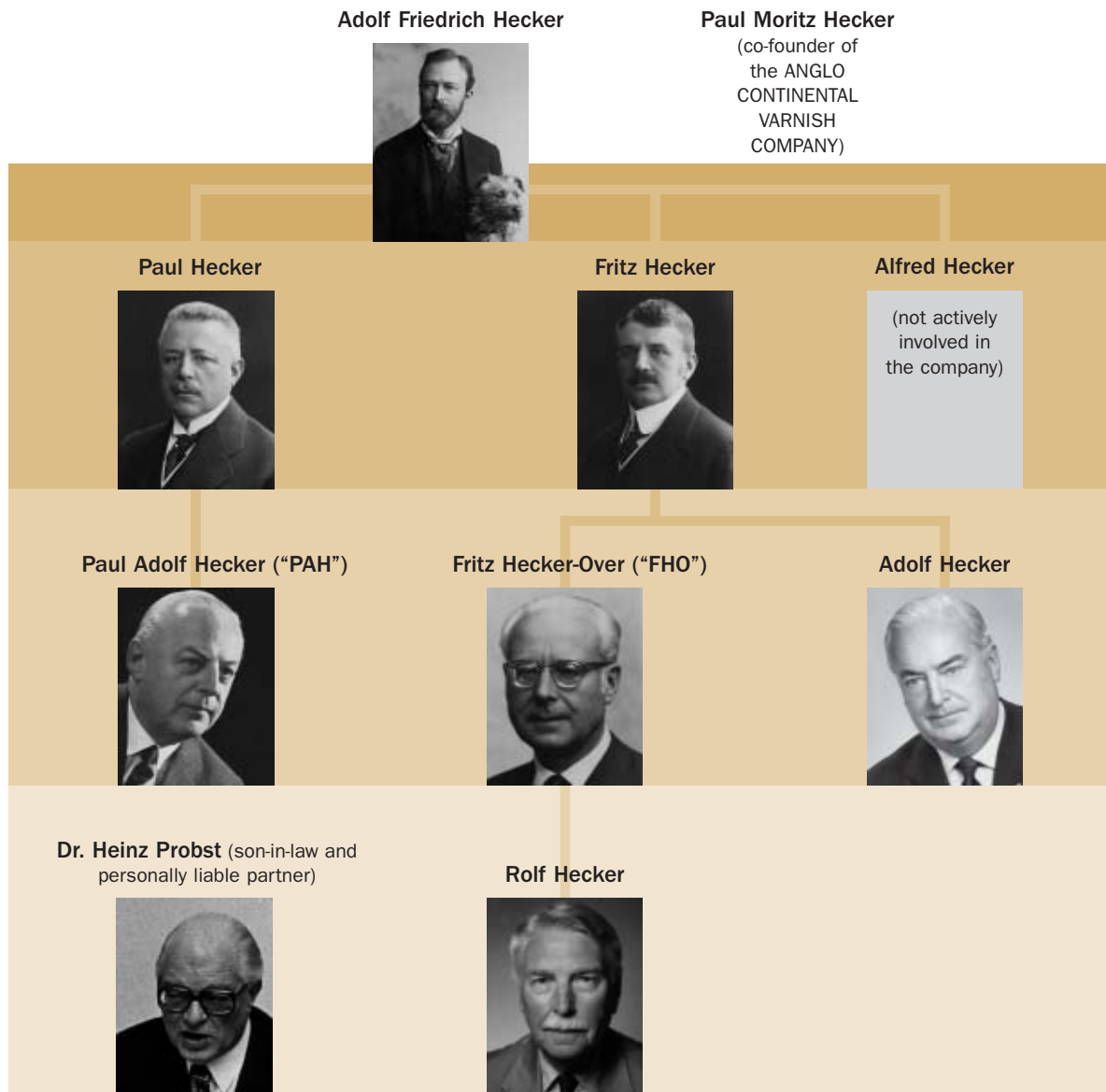
The pitch works consisted merely of a melting kitchen and a small house with a steeply pitched gable, a ground floor, first floor and a wobbly wooden staircase. The only redeeming feature was the large garden which was full of fruit trees and magnificent rose bushes. Adolf Hecker considered demolishing the entire site but this was not possible, due to the fact that the licence for paint manufacture would then become void. He therefore had no choice but to refurbish and modernise the premises. This option, however, was not easy to finance as the Cologne banks were disinterested in smaller companies. Their main business was in developing the railways and Ruhr district mining, which were the two driving forces behind German industry. Strangely, trams in Cologne were still operated at the turn of the century by a Belgian company and paint making was also left to European neighbours, mainly the British. The world's leading economic empire, Great Britain, not only had more money at its disposal, but also, thanks to its colonies, all the resources necessary for



paint production – namely, the much-coveted copal. Britain was the main supplier of high-grade coach and wagon paints in Germany. At the time, there was not a single German paint factory that could match the products of the large British firms such as Noble & Hoar's, Harland & Sons, Mander Brothers, Wilkinson, Heywood & Clark Ltd., or Ingham & Sons.

■ *Product label, ca. 1890.*

■ *Company site in the Thirties.*



■ Hecker family tree.

German-British family agreement.

■ Adolf Hecker still had not found a financier for his big project, but then fate gave the aspiring paint manufacturer a helping hand. His brother Paul Moritz Hecker had moved to England in 1871 and was doing a roaring trade in London with chemical products, particularly with sulphate of ammonia that was used as a fertiliser. In addition, Paul Moritz was in charge of the General Agency for Britain and Ireland of the German Potassium-Saltpetre Association. In this function, he had excellent connections

which afforded access not only to money, but also to the raw materials for the production of top-quality paint. Among his connections were brothers Adolf and Hermann Spies. The sons of a Master of the Hunt of the Hereditary Grand Duke had emigrated from Darmstadt to London, where they traded in a variety of chemicals, served as wholesalers and importers of paint and all kinds of raw materials, in particular copal. With this stroke of luck, Paul Moritz Hecker became a partner of Spies Brothers & Co.



■ *Adolf Friedrich Hecker and Hermann Spies.*

On 1st January 1881, the Spies brothers and the Hecker brothers founded the ANGLO CONTINENTAL VARNISH COMPANY Köln und London E.C., abbreviated to ACVC, which was entered in the Commercial Register in Cologne on 1st January 1882. The company's registered offices were in Cologne and London, Adolf Hecker became Managing Director. The business could now advance in Raderthal. The melting shop was given a corrugated iron roof topped with a small English cowl and a weather-vane. Everything required to start up production was imported from England – including weights and measures. In addition to the small shop, two brand-new houses were built along with an annex which created sufficient space for a whole row of larger storage basins. ACVC publicised its speciality products in newspapers advertising their “Coach paints, English wagon paints, durable weather-resistant varnishes, spotless table varnishes, hard-drying floor paints, non-blooming and non-cracking decoration paints, genuine amber paints, radiator paints, marble paints, garden fur-

niture paints, blackboard paint and seat varnish for church pews.”

In 1884, the worldwide economy boomed. The first municipal hydroelectric power station went into operation in England, the first skyscrapers were built in North America, the whole world danced to Johann Strauss waltzes and Gottlieb Daimler developed the first petrol-driven car in Stuttgart. Daimler achieved a major breakthrough two years later together with Wilhelm Maybach when they installed Daimler's engine in a carriage which then ran at a breakneck speed of 12 km/h!

Despite all the euphoria, and after only five years, Paul Moritz left ACVC. The investment was not as lucrative as he had hoped and Paul did not want to lose money. If only he'd been a little more patient!

In his ceremonial address on the 75th anniversary of the Spies Hecker company, Rolf Hecker described the initial difficulties that his great-grandfather



■ 1913: Letterhead stating "Top-rate coach paints according to the best English system".

Adolf Friedrich Hecker had faced in establishing the image of German paint manufacturers at the end of the 19th century: "It was difficult to gain a foothold in the German market with our products because, at that time, German goods were typically rated 'cheap and cheerful' by the British. A British company name alone was not enough. Adolf Hecker had to go a step further and this entailed taking on an English master paint maker capable of bringing a wealth of experience to the company which at that time was only available to the British."

In the 19th century, "Made in Germany" was anything but a hallmark of quality. Highly elegant paintwork was considered a great art – and German paint did not have this reputation, often being referred to as 'pear syrup or bird glue'. It was the job of the master paint maker Mr. Morgan to change this image. The paint specialist who Adolf Hecker "imported" from England was considered a specialist in high-grade coach paints. In 1890,

Morgan was superseded by Richard Axmann, a brother-in-law of Hermann Spies. The man with the reddish-fair hair and a remarkable moustache came originally from clock making, learnt the art of paint making in England and brought his older brother Charles over to Germany. Adolf Hecker's son Fritz had an ambivalent attitude towards Richard Axmann, who remained faithful to the company until 1912.

"Alongside the melting shop, he had a whole range of hobbies, which included the grand-scale breeding of rabbits and English pure-bred chickens. He also found the time to court Miss Moll, the daughter of the neighbouring landowner, and was particularly enthralled by her splendidly strapping legs and the prospects of her inheriting millions from the family's estates! Miss Moll became his wife and eventually gave birth to four children, a son and three daughters, but the millions never materialised. His interest in the factory was divid-

ed and he lacked the conscientiousness required in the extremely difficult and delicate process of making high-quality paints and, in particular, wagon and coach paints.”

Despite these minor set-backs, paints produced by Axmann evidently were not the worst; the little company grew steadily. Within a short time, the firm had made a good name for itself at home and abroad. As early as 1892, approximately ten years after the founding of ACVC, the company had three shareholders of commercial authority: Adolf Friedrich Hecker's eldest son Paul, born 18th November 1864, Richard Axmann and Ludwig Bauer. The burden of responsibility was no longer shouldered by the founder alone, but was shared with three others. Each had his own special task. Richard Axmann was in charge of production, Ludwig Bauer's role was to manage the office employees, take responsibility for bookkeeping and finances, and also to train and hire apprentices into the trade, whilst Paul Hecker was responsible for sales. Despite their distinguished positions, the men at the top were by no means averse to travelling on behalf of ACVC. They visited potential customers, advertised the company and its products, and wrote out the constant orders. Rolf Hecker described how the company owners' tradition of maintaining close contacts with many old customers stems from this period, adding that these personal contacts were a major factor in business expansion.

By 1893, this commitment to customers had paid off. The facilities were bursting at the seams and the “VARNISH COMPANY” moved into new premises in Mechtildisstrasse 4 in August of that year. These not only accommodated offices and stores, but also served as a private dwelling. In the same year, Adolf Friedrich Hecker's youngest son Fritz, born 22nd February 1873, who had spent five years abroad in London and Paris, returned to the family and joined the company as a paint technician.



His starting salary was 145 marks. His grandson Rolf Hecker still remembers that his grandfather proudly reported how many tons of copal he personally melted over the years. Fritz-Hecker-Strasse was named in his honour.

At the end of the 19th century, the melting of copal was still not a scientifically controlled process.

■ *Company site in the Thirties.*

■ *Production shop with mills.*

It was one that depended on skill and many years of experience. The more experienced the employee melting the copal, the better the end result of the paint. Of course, since natural products were used, these yielded different results every time they were processed into clear coats. Rolf Hecker explained: “Only those who constantly stood at the boilers developed the skill required for the making of quality products.” It is therefore hardly surprising that experienced ‘paint boilers’, particularly if they came from England, were much in demand.

The big drawback of paint production was that the workers and the immediate neighbours were exposed to irritating fumes. Fritz Hecker’s memoirs state: “Because of the high quantity of fumes emitted by the distilled copal oils, the melting shop

was so full of vapours that you could scarcely see your hand in front of your face.”

Only much later were extractors installed with high-quality fans large enough to cope with these fumes. The exhaust fumes were fed through water-cooled coils and settlement chambers for the condensed oil, and what was left over was burnt under the steam boiler. There were still plenty of hazards, however. For example, the boiler and its vapours could ignite, causing the waste gases to explode, thus setting other boilers on fire. Fritz Hecker Sr. reports: “Eyebrows and moustaches were singed in explosions on a daily basis. Serious burns also occurred, and death was often only a step away.” Adolf Friedrich Hecker and his sons were by no means spared such injuries.

Neither were they spared by a mighty tornado that swept through the Rhineland in the summer of 1898. Fritz Hecker Sr. states: “Our factory was also badly affected. Stripped roofs, a flattened factory wall and the tall factory chimney twisted, lifted up and dropped into a stand containing black enamel paint. A major blow for the company. From then on, the factory was insured against storm damage.” Fortunately, no claims have since been made!

At this time, Wilhelm II, aged 29, had ascended the German imperial throne, while John Pemberton in the USA had invented the perfect recipe for fizzy drinks. He called it “Coca-Cola”. In the automotive sector, the pace was quickening. At the Paris World Fair in 1889, the first all-steel car with a two-cylinder V-engine was unveiled. The German Empire was given the island of Heligoland in exchange for Zanzibar and seized Togo, Cameroon, and South West and South East Africa. Germany at last had colonies of its own and access to the much-coveted copal. Alongside all of this, the “VARNISH COMPANY” in Raderthal was progressing, and the paint factory grew steadily.

■ Fritz Hecker Sr. (right), ca. 1900.





Fritz Hecker Sr. again notes, “We first produced floor paints, decorative paints, dammar varnishes and asphalt paints with various techniques.” With the recruitment of Mr. Morgan, the paint specialist, production gained momentum. For the first time in 1887, coach and sanding varnishes were included in the product range.

Fritz Hecker Sr. continues, “With the perfection of wagon and coach paints and their acceptance by coach painters, the team of agents and distributors grew considerably in major towns and cities. Soon, the whole of Germany, far through to the east, from Königsberg-Danzig to Katowice, had developed into a huge sales territory.”

By 1914, production and sales had expanded even further. Annual sales had doubled since 1898. The raw materials required for paint production were still supplied by the Spies partners in England. Sales with varnish and pigmented paints were expanding too.

	Clear coat	Pigmented paint
1910	487,800	143,952
1911	601,951	201,258
1912	741,376	209,358

■ Spies Hecker paint boiling shop. Copal and barrels of oil were stored outside.

At the turn of the century, the paint industry started to produce not only varnish, but also ready-mixed pigmented paints. PERMANENT paint and PERMANENTWEISS (white) for the railcar industry and the state railways were the first ACVC trade marks. Their outstanding quality gave the company a name throughout the empire. Rolf Hecker explains, “By now the company had grown to such an extent that it became necessary to rethink its current form. The risks had grown, and the English partners were liable with their entire assets, although not directly involved in business development. It all pointed to the creation of a company with limited liability. It was founded in 1911, and on 1st January 1912, with capital of 1 million gold marks and reserves of 100,000 gold marks, the company was renamed Spies, Hecker & Co. GmbH.”



■ Advertisement of 1911, with illustrations of the Rhineland.

Unfortunately Adolf Friedrich Hecker did not live to see this change. The company founder, who was now a board member of the Association of German Paint Factories, which he co-founded in 1900, died in 1909, just a few months after his beloved wife. Rolf Hecker, his great-grandson said: “It was now the turn of the second generation to advance the company. Spies Hecker & Co. GmbH has enjoyed the confidence of its English partners who, on the founding of the GmbH, continued to leave the responsibility of running the business to their colleagues in Cologne. It was then decided that Paul Hecker, my grandfather Fritz Hecker Sr. and Ludwig Bauer, who had been working for the company for over 25 years, should now manage the company.”

Nearly all sections of the population benefited from the continuing boom. The standard of health care improved dramatically, utility supplies of water, gas and electricity were made available to many houses. Newly built drains and sewers and an improvement in eating habits led to a steep increase in the birth-rate. Germany’s population of 50 million in 1890 had rocketed to 67 million by the year 1913. Almost the entire population was confined to the cities, which of course included Cologne. The consequences of rapid urbanisation meant that power stations were built, trams and street lighting were electrified, and the railways began to transport large quantities of fish and cereals into the towns. Large markets and department stores supplied the German population with fresh foods, added to which canned produce quickly became available too. Despite rapid progress, the Germans remained loyal to their dearly loved Kaiser Wilhelm. This was demonstrated by fashionable men-folk who wore twirled moustaches like the Kaiser.

Internationally, Germany still lacked recognition. The German Empire’s show of muscle on the world’s political stage was a source of irritation to many European powers. In 1904, Britain and France settled their colonial differences and entered into an alliance (the Entente cordiale). In 1905, the Kaiser’s attempts to renew the old German-Russian alliance failed. Two years later, a British-Russian treaty was signed. Germany was isolated, apart from its ally Austria-Hungary. Other political strategies led to unrest in the Balkans. However, the Germans refused to be pessimistic. “Now we’ll show them!” was their motto.

Fritz Hecker Sr. records in his memoirs: “We shuddered at the premonition of impending disaster. England was lurking in the background, aided by France and its Russian ally in an alliance forged by Edward VII. The decades of accumulated hatred

of the German Reich began to take a menacing shape. We had become immensely rich. Throughout the world, we had amassed huge capital and large companies and factories were in our control. We were a deadly competitor to the whole world. Spies Hecker & Co. GmbH had also grown rich by this time, the capital invested in our company had increased enormously, and business was flourishing, even if differences of opinion in the management prevented greater expansion.”

The First World War and the consequences.

■ Despite thunderclouds on the horizon, the relatively new Spies, Hecker & Co. GmbH was fast developing into a well-known name. The company now had 8,000 customers. However, with the assassination of the heir and his wife to the Austrian throne by a fanatical Serb in Sarajevo on 28th June 1914, the economic boom was brought to an abrupt end. On 31st July, Russia announced its general mobilisation, and, on 3rd August 1914,

Germany declared war on France. In response to this act, two days later, Britain declared war on Germany. This was a disaster for Spies Hecker & Co. GmbH, because the company was then cut off from its sources of raw materials, which severely hampered paint production.

Nevertheless, despite this predicament, provisions had been made. Fritz Hecker Sr. said, “When the world war broke out, we were well equipped for several years as we had a considerably large stock of raw materials. At Brinkmann & Mergell alone we maintained current contracts for 260,000 kilos of linseed oil, not to mention the sizeable reserves that were stored in our factory. We sold back a large part of this stock in the course of the first year of the war, but obtained new supplies again and again and managed to maintain the production of oil-based pigmented paints and varnishes throughout most of the war. We also had large quantities of copal in storage, and, because of extremely low prices at the time, had put several hundred crates of shellac into storage for speculation purposes. Since the government required us to make a

■ *Soldier with a field kitchen in 1916.*

■ *Aerial views from Cologne Cathedral, ca. 1920.*





■ Plant site at the beginning of the 20th century.

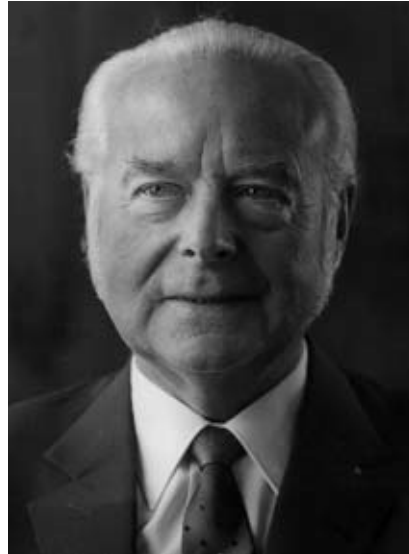
■ Mill shop with funnel mills for small batches.

detailed audit of our raw materials soon after the outbreak of the war, the reserves of shellac were listed, based on the invoice calculations. As time progressed, the War Corporation took over all of our shellac reserves, but paid us the higher sums invoiced. As far as I can remember, this amounted to a surcharge of ten per cent! As we heard at a later date, these war (racketeer) corporations in Berlin sold the shellac to the war industry with a surcharge of several hundred per cent. Shellac was in big demand for the production of hand grenades and other weapons. The remaining 4,000 kilos of bleached linseed oil, which my brother unfortunately reported to the War Corporation, was naturally taken by them towards the end of the war.”

Then came the fateful year of 1917, and the company was put to a particularly severe test. In breach of international law, Britain had gone to the lengths of confiscating the private property of German citizens living in Britain, selling and claiming the proceeds for war purposes. As a result of this act, the government of the German Reich, proceeded, in a like fashion, with British private property

in Germany. For Spies, Hecker & Co. GmbH, this initially meant the confiscation of the shares of the British shareholders – a disaster, since the Spies brothers owned the lion’s share of the business assets. If these shares had got into the wrong hands, it could have meant the end of the company under the management of the Hecker family. Making huge sacrifices, they purchased the shares of the British partners for half a million gold marks, which was paid in full.

On 9th November 1918, Kaiser Wilhelm II announced his abdication and fled into Dutch exile. Germany had been defeated in the First World War. Whilst Spies Hecker had been able to maintain operations even in difficult times, the stocks were at last depleted and the money for the purchase of new paint resources could not have been scarcer. Rolf Hecker said, “If the stocks hadn’t been sold in 1917 to purchase the confiscated shares, there would have been sufficient funds for modernisation of the works. As things stood, this wasn’t even possible during the period of inflation and the company reached a new low in late 1923. In the meantime,



■ *The third generation of the Hecker family: Paul Adolf Hecker, left, and Fritz Hecker-Over, right.*

the company, without British involvement, had undergone changes. There was now a limited partnership for production activities, while the GmbH (limited liability company) merely served as a property company for tax reasons. The second generation now became personally liable partners.” After the currency reform on 1st January 1924, the company was left with assets of 540,000 Reichsmarks, only half of what they had owned in 1911.

A minor economic miracle and its rapid end.

■ The third generation of the Hecker family played an active role in the business. These were Paul Hecker’s son Paul Adolf Hecker, born 29th October 1896, known as PAH, who had been working for the company since 1913, and Fritz Hecker Sr.’s two sons, Fritz Hecker-Over, born 20th April 1903, known as FHO, and Adolf Hecker, born 19th April 1904. The enterprising attitude of the young men continued in the old tradition and only five years after the world economic crisis, in 1929, the company was again in a good state of health. Germany found itself in a phase of expansion. Foreign loans and investments gave the opportunity of introduction to the latest technology. Siemens and the Allgemeine Electricitäts-Gesellschaft (AEG) in Berlin regained their positions on the world market which they had held prior to 1914. In 1927, NSU became the first German company to build motorcycles on the assembly line, and Daimler-Benz AG was founded in Stuttgart in 1926. With the growth of motorisation and road traffic in the 1920s, the

motor vehicle industry became increasingly important. From 1922 to 1928, the number of cars and trucks driving on the roads rose from 125,000 to about 470,000.

These were fortunate times for Spies Hecker. In 1927, the company underwent large-scale restructuring, both in terms of the organisation of sales and in the application of new production processes. The latest trend towards nitrocellulose paint came from America. It involved the processing of non-powdered guncotton, also known as collodion or nitrocellulose. It is unclear how much the older generation shared the younger generation's enthusiasm and commitment to progress, but a comment from Ludwig Bauer, (who was a distinguished holder of full commercial authority and later manager) illustrated the need to reorganise production: "Then we'll just have to produce cellulose paint from now on!"

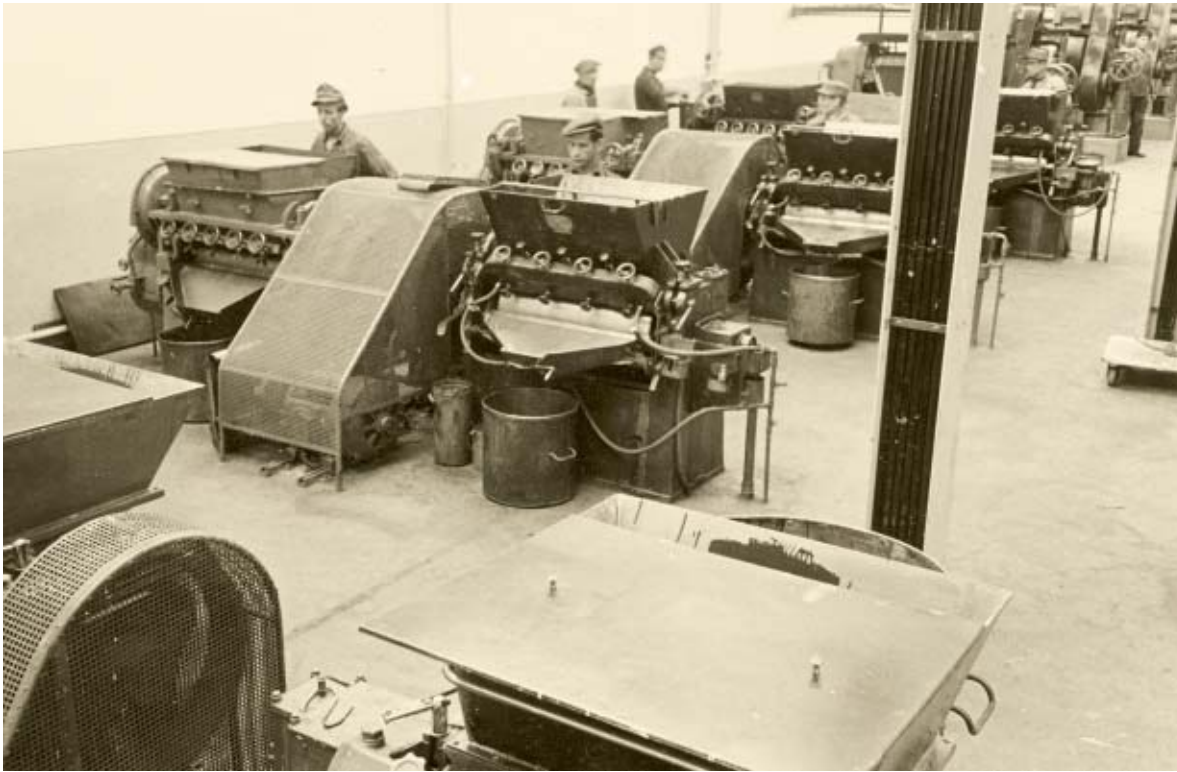
Fritz Hecker Sr. said, "Each week during this growth and highly profitable period, the company sold many tons of sanding paint and hundreds of kilos of the finest coach paints worldwide. The paints for bulk purchasers were supplied in clean 25 kg cans or, for coach painters and small businesses, in small, attractive, tin-plated sheet metal cans."

Unfortunately, at this time the company suffered a great loss. In 1929, after a long and serious illness, Paul Hecker, the eldest son of company founder Adolf Friedrich Hecker, died. His son, Paul Adolf Hecker (PAH), took over his father's position, which in the 1920s mainly involved commercial duties. PAH had spent a long time in Kassel-Bettenhausen, where the company had built up a branch operation after the war. During the French occupation of the Rhineland, which included Cologne (this had cordoned off the region), it had no longer been possible to serve the company's customers. A branch was thus founded at short notice.

The glorious days of trial and error, of paint making based on years of experience, were numbered. Research and science increasingly made inroads into the production process. This also applied to some extent to the production of nitrocellulose paint. At first, Spies Hecker obtained assistance by joining forces with allied companies that had the necessary expertise. Together, they brought a new product by the name of "TEMPOLOID paint" onto the market. Rolf Hecker explained, "It was soon afterwards that we left, because we realised that greater success was to be achieved with our own efforts."

Then came FHO's moment of glory. In the face of his father's resistance, he pushed ahead with the development of up-and-coming synthetic resin paints and campaigned for the inclusion of oven-drying paints in the development and production programme. The customers were delighted, and Fritz Hecker Sr. magnanimously forgave his headstrong son's high-handed action. With the onset of the Great Depression in 1929/1930, the phase of economic growth came to an abrupt end. Throughout Germany, the successful expansion of business was once again halted. The withdrawal of American loans which had laid the foundations for the boom starting in 1924 led to companies collapsing all over the German Reich. From 1929 to 1932, industrial output dropped by 40 per cent and fell back to the 1904 level. 1931 saw the breakdown of the international currency system. The German people stormed the banks in a bid to rescue their savings. The bank crisis deepened the economic recession. As a result, 6.2 million Germans were out of work by 1932. The widespread hardship proved to be fertile ground for the growth of National Socialists.

Rolf Hecker recalled, "It started with a wave of bankruptcies. We were not affected, but many of our customers were. In 1931 and 1932 we made a loss. It was not the fault of the company, but



■ Production shop with mills for the grinding of pigments in the Thirties.

due to the Great Depression that started in the USA and soon gripped the whole world. When 1933 arrived, we were poor again but still full of enterprise. We eagerly forged contacts and meticulously analysed our company's situation in administration and production. When the glimmer of economic hope finally appeared on the horizon, our company bounced back. (...) Before the worst was over, business was reorganised. It started with second-hand machines although these were expensive enough!" The future began to look brighter, both the company and the product range underwent major changes. In addition, Spies Hecker purchased a plot of land from the City of Cologne in 1936. The company was able to increase the radius of its business site in Raderthal and the office was extended. Added to this, the nitrocellulose and distribution departments were set up.

Sadly, in December 1935, Ludwig Bauer died, but not before witnessing the first steps of this new upward trend. Rolf Hecker said, "The company owes him a great deal. It was he who always had a clear idea of our financial standing from the early days through to his death, and he always stated his position with the necessary authority. (...) Anyone who worked with him knew how strongly his name gave the company financial respectability." Following the death of Ludwig Bauer, reorganisation within Spies Hecker became necessary. The responsibility for the running of the company was already being shared with the third generation. Of the three personally liable partners, only Fritz Hecker Sr. now remained. It was time to transfer full responsibility to the juniors: Paul Adolf Hecker (PAH), Fritz Hecker-Over (FHO) and Adolf Hecker, who managed the company together with Fritz Hecker Sr.



■ *Calendar of 1941. The customer letter of 1948 (right) states: "In 1941 we were heavily criticised because of the 'Schwarze Korps' – and at the time it was only two pictures that caused offence ... may we have the good fortune to all be able to work in peace and with success in the new year on the restoration of normal conditions."*

The Second World War – on the brink of ruin.

■ By 1939, the workforce had grown to 250. Then, on 1st September 1939, Adolf Hitler declared war on Poland. The reaction from Britain and France, who in March had guaranteed Poland's independence, followed promptly. On 3rd September 1939, both countries declared war on Germany. The Second World War began. Fritz Hecker-Over had been 'called up' even before it began. Many were to follow, but although the workforce by this time had been reduced to 100 employees, operations were maintained – albeit in simplified conditions. Even in 1941, Spies Hecker achieved a good result and produced 3,000 tonnes worth 5.5 million Reichsmarks. However, the shortage of manpower caused sales to fall dramatically.

The company had achieved:

1942	2,900 tonnes (4.8 million Reichsmarks)
1943	2,300 tonnes (4.3 million Reichsmarks)
1944	1,400 tonnes (3.4 million Reichsmarks)
1945	400 tonnes (0.7 million Reichsmarks)

In an interview with the Chamber of Industry and Trade (IHK) in 1959 (still available today in the Rhenish-Westphalian Business Archive, Cologne), senior boss Paul Adolf Hecker reported: "Even in the last year of the war we achieved more in terms of quantities and value than in the best year of peace time. All this with only half of the workforce."

In 1942, the company management decided to relocate various branches of the business. Allied firms increasingly carried out paid work for Spies Hecker and stored raw materials for the company. Among these were the Detmold paint maker Niesen und Söhngen and Klett & Schürhoff in Solingen, which formed a wartime joint venture with Spies Hecker. In 1943, in the district of Ludwigsburg, the company leased a firm with its own staff. In Liegnitz in Silesia, a brand-new relocated plant was established. Initiated by the Paints Group, the Vienna-based company Reichert, Krüger & Böcking was also ordered under an emer-

gency aid programme to supply paints to the rail car industry on Spies Hecker's account.

Air raids directed at Cologne which affected the Spies Hecker paint factory started in 1941. Only after the war did the family learn that the plant had been one of the enemy's declared targets. However, it wasn't until 9th June 1943 that the plant was actually hit during a major raid. Fortunately, the works fire service was able to prevent the worst damage. Only 20 days later, on 29th June 1943, the next heavy bombing shook the 'Rhine' side of the city. Exploding bombs and countless incendiary bombs destroyed the installations and outside storage areas of the factory. The company lost its entire administration building, the paint store and several

their sense of humour even in sheer hopeless situations. As Paul Adolf Hecker records, "On 29th June, I called the works fire service so that I could thank them after the terrible night of bombing. We were as black as soot from our efforts. Nevertheless, everyone was satisfied because so much had been saved. In the ruins of my office, a joker from the fire service found a large, iron cross and looped a coloured ribbon through it. The cross had been awarded to my father in 1916 and he had given it to me as a paperweight. And now, as a token of gratitude from the workforce for my valiant efforts during the air raids, I was awarded the 'Iron Cross'!"

Work continued at the Raderthal site for as long as there was electricity. However, in the early hours of



workshops. Only the underground tank farm and the stored solvent remained intact. Spies Hecker's works fire services were able to save the key production installations, machines and apparatuses as well as the main laboratory and shipping department from destruction. An anecdote from Paul Adolf Hecker demonstrates that his staff protected the company at the risk of their own lives and never lost

17th October 1944, the synthetic resin department was destroyed. 78 per cent of the company's facilities had been wiped out. Paul Adolf Hecker said, "Until then, rubble had constantly been cleared away so that operations could continue. Machines were dismantled, and the most important documents and office equipment relocated. It was worth it. These items still exist today!" On 7th February 1945, the

■ *Plant site in Cologne-Raderthal after the war. 80 per cent of the buildings were destroyed.*

Mil Gov Form RESD/F. 13 RENEWAL

Province North Rhine RESD Branch ECON 8

Regierungsbezirk Köln Initiated by: 714 (P) Det.

MILITARY GOVERNMENT OF GERMANY

PRODUCTION PERMIT FOR INDUSTRIAL PLANTS

To: (Firm's name) Spies, Hecker & Co. Anglo Continental Varnish Company
 (Address) Köln-Raderthal
 (Kreis) Stadtkreis Köln

1. This is a PERMIT to (a) ~~START PRODUCTION~~ } Delete
 (b) ~~INCREASE PRODUCTION~~ } those not
 (c) RENEW PRODUCTION PERMIT } applicable.

2. The AUTHORISATION NUMBER of this Permit is HRP/ECON 8/53/

3. You are authorised to carry out the following production in your factory at Köln-Raderthal

PRODUCTS	QUANTITY
lacquers and paints	50 tons monthly

4. This Permit is valid until until further notice. A further application will be made by you in writing before this date if production is to be continued.

5. You will not engage in the production of any other goods except those authorised in Para. 3 of this Permit, nor in any other activities without the permission of Military Government.

6. You will render a return in English to the Military Government Detachment for your district on the 10th of each month. For this purpose Mil Gov Form RESD/F. 14 will be used. Supplies can be obtained from your Landeswirtschaftsamt or Military Government Detachment. The return will be rendered promptly as your allocation of controlled commodities including fuel will depend on its receipt by this office on the correct date.

Stamp of Issuing Authority: HEADQUARTERS MILITARY GOVERNMENT NORTH RHINE PROVINCE (A (P) DET. HRP/ECON 8/53/1 DATE 30 11 45 CONTROLLER ECON

Signed _____ Position _____ Date _____

Copies: 1 to Firm
 1 to Kreis det
 1 to LWA
 2 to RESD
 1 to P-Det.

■ Production permit from the American military government of 30th November 1945.

Russian occupying forces confiscated the factory in Liegnitz with its valuable raw materials and high-quality machines. The Poles later resumed production – a bitter loss.

On 17th October 1944, the plant in Raderthal was seriously damaged. Production could no longer continue. Apart from a skeleton team to protect the site, the workforce was dismissed. “This was a tough decision for the management, because for some of the staff it meant being called up for military service at a time when none of us saw any point in continuing the war,” said Paul Adolf Hecker

in his interview with the IHK. In order to maintain contacts with the authorities, customers and suppliers and also to secure the valuable files, the administration of Spies Hecker moved at short notice to Morsbach an der Sieg. A small team worked there until March 1945, and the last three employees guarded the assets located there until production was resumed in Cologne. The laboratory was moved to Detmold and a large part of the equipment to Solingen-Gräfrath.

The three liable partners, Fritz Hecker Sr., Paul Adolf Hecker (PAH) and Adolf Hecker, and their families remained together in Cologne through to the bitter end. The last days were spent with the skeleton workforce in the company’s air raid shelter. The war ended in Cologne on 7th March 1945 and the plant in Raderthal was occupied. Paul Adolf Hecker vividly recalled this day in his IHK interview: “I was at home, and my daughter Alice looked through the half-open shutters and suddenly exclaimed: ‘Daddy, they’re here!’ A young lad with a gun under his arm strolled in and asked, ‘Got any soldiers, guns, whisky?’ I replied that we didn’t, but my old housekeeper, who had spent seven years as a maid at the Dorchester Hotel in England, received the young man with the words, ‘No, we don’t have any soldiers, guns or whisky, but you can have a cup of our excellent Hitler coffee – like to try it?’ The soldier sat down on the edge of the table in the kitchen and enjoyed a cup of ersatz coffee!”

Everything seemed to be lost, but essentially what still remained was the optimism that company founder Adolf Friedrich Hecker had never given up even in his darkest hour. On 30th November 1945, Paul Adolf and his cousin Adolf Hecker obtained permission from the American military government to continue production. Paul Adolf Hecker explained how this came about. “We cycled along the Kaiser-Wilhelm-Ring to where the military government was accommodated. On the landing between the

ground and first floor was a young American chewing gum at his desk. Handing him our business cards, we tried to make ourselves understood, whereupon the young man lowered his legs from the desk, stared at us, thumped the desk and said in his Cologne dialect (Kölsch): ‘You fools, why don’t you speak Kölsch?’ We were of course astonished and could not fathom where we had met this man before. He then explained: ‘I used to work for Lissauer in Elisenstrasse and sold you many hundreds of tons of zinc white.’ We had no doubts that he would put in a good word for us with his boss.” This is how Spies Hecker obtained its operating licence so quickly!

At this time we were still far away from normal operation. First of all, the debris had to be cleared. Fortunately, an underground tank on the site containing the Homologen fuel mixture had survived intact. It was used for fuelling a bulldozer, a digger and three huge dumper trucks that removed a total of 5,250 truck loads of rubble from the factory site. On 26th July 1945, the British military government awarded the company its provisional licence to resume production and on 30th November its permanent licence. As soon as electricity became available, production started up. At last, Spies Hecker was producing paints again, paints much in demand, as the story from Paul Adolf Hecker confirms: “We were sitting in our flat in the evening when the doorbell rang. My housekeeper went to the door and said, ‘There’s an Englishman to see you.’ In came a giant of a man, accompanied by another gentleman, called Major David. I offered the two gents some refreshment and asked the taller of the two, who was still unknown to me, what he wanted. The gentleman showed me his business card; he was a representative from the British Filtering Company who had just come from the salt mines in Kreuznach where he had examined a blood filter. My ears pricked up, as we were the suppliers of the filter linings. I therefore asked him naively,



‘Have you obtained all the information you need?’ – ‘Oh no, Mr. Hecker,’ he replied, ‘I haven’t found the manufacturer of the paint that is used for lining the blood filters.’ I now became cheeky and asked, ‘Well, did anyone in Kreuznach tell you what the paint is called?’ – ‘Just a moment, please,’ he answered and pulled out a notebook. ‘It’s called PERMANAX.’ My daughter who had missed the earlier part of the conversation chipped in: ‘Daddy, that’s the paint that you make!’ The Englishman was highly amused, held out his golden cigarette case and said, ‘In that case, I shall visit your factory tomorrow and collect the formulation.’ The next morning I went to my chief chemist Dr. Tamm and said: ‘An Englishman will be along shortly. He wants to have our PERMANAX formulation for blood filter linings. We have to take action to prevent this.’ We fetched the formulation and shifted the decimal points a little in two places. Then we wrote out a new card which we artificially aged by trampling on it and tipped an ashtray to effect the aging process. The Englishman arrived, we handed him the card and he put it proudly in his pocket. We could not help but smile inwardly. That must have been a fine old paint!”

■ 1945: American soldiers in Cologne.



Product history.
1882 - 1945.



■ Mobile paint boiler.



■ Shellac was produced from the metabolic secretions of lac insects.

■ Copal, a fossil hard resin, was an essential raw material for the production of paint (this is Kauri copal from New Zealand).

Insects and lac trees.

■ Lacquer. Coloured varnish of shellac dissolved in alcohol ... (Concise Oxford English Dictionary, Sixth Edition, 1975)

There are several words in English for protective and/or decorative coatings, for example paint, varnish and lacquer, but it is lacquer that reveals the most about the early history of painting. The term “lacquer” (and the German “Lack” meaning “paint”) are derived from the Indian Sanskrit word “lakṣa” which, literally translated, means “a hundred thousand”. It refers to the myriad lac insects (also known as “lakṣa”) crawling over the twigs of trees. Their resinous metabolic secretion, an entirely natural product, yielded the first high-gloss paint. It was quickly realised that this resin could be isolated by heating and applied to other surfaces before it hardened again after air-drying. The shellac records invented by Emil Berliner from Hanover in ca. 1880 are also based on this substance.

The first “paint producers” in human history were Neanderthal man and the Australian aborigines. For want of lac insects, primitive man used natural pigments, such as red and yellow iron oxides, chalk and charcoal. For binders, they used animal fats, egg white, egg yolk and also blood. It was probably the Egyptians who developed the first paints and lacquers with synthetic ingredients. For instance, the death mask of Ramses III, who died over 3,000 years ago, was coloured with Egyptian blue, a mixture of organic and inorganic materials as binders, e.g. gum Arabic, gelatine, beeswax, limestone and gypsum.

Lacquer work, on the other hand, has its origins in China. The furniture and vases of the oldest known work date back to the period of ca. 200 BC. When Marco Polo set off for China in 1271, the art of lacquer work was already a 2,000-year tradition. The Chinese derived their lacquer from the sap of the lacquer tree. The classic colours of red and black were obtained by adding cinnabar and soot.



■ *The car age started with the motorised horseless carriage (Daimler-Benz).*

No effort was spared in achieving the ideal high glossy coating. The substrate was treated with several layers of a putty-like substance and up to 200 coats of lacquer. Each coat could take approximately one week to dry, but they were required until the workpiece had the desired depth of gloss. Thanks to Portuguese traders, these valuable treasures from distant China reached Europe at the beginning of the 16th century.

The Europeans were delighted and desperately wanted to produce such precious items themselves. However, their efforts were thwarted for a long time by the inability to obtain the raw materials. The realisation, published by Jesuit priest Martinus Martini in 1655, that Chinese lacquer was obtained from a tree resin, was of little help as the lacquer tree did not flourish in Europe. Alternative formulations were invented and the European aristocracy seriously attempted (but with little success) to imitate Chinese lacquer work. The outcome was a widespread craze for Chinese-style

lacquer work, which added a striking new element to late Baroque and Rococo art in Europe. Lacquer work in France and England first bore fruit at the time of the Sun King Louis XIV at the end of the 17th century.

In the 18th century, lacquer was derived essentially from copal and amber. The use of turpentine oil as a solvent improved application at room temperature. Physical drying, along with the associated emissions, had been invented.

Coach paints.

■ High society was ecstatic, as the nobility could now effectively protect their stately coaches from the elements and set themselves apart from their aristocratic rivals by applying a coloured finish. When the coach became the standard means of transport for the masses, new fields of application evolved for the craft painter. The best coach paints



■ *Slow-drying paints called for special, largely dust-free rooms.*

came from Britain and consisted of thickened oil boiled with selected hard copal. The products from Britain gained world fame and set the standard in the art of paint making until the end of the 19th century.

Traditionally, Britain with its colonies had access to the much sought-after resources and, above all, copal. Fossilised copal resins were imported from many countries, but mainly from the tropics. From Sierra Leone, Manila and – the most precious – Zanzibar, copal was shipped from trading places such as Amsterdam and London. The second most important raw material, turpentine oil, mainly came from the Southern States of the USA. Fritz Hecker Sr. recalled, “In the good old days around 1914, we imported 100 barrels of turpentine oil several times per month straight from America.”

It was therefore a good move on the part of Adolf Friedrich Hecker to bring into the business as a partner his brother Paul Moritz, who lived in London, the city that imported precious copal to Britain. Since the production of coach paint was an art that passed from one paint maker to the next, Spies

Hecker hired an English expert to mix the paints for the company in Germany: Dr. Fritz Sadowski, who was for many years in charge of the Spies Hecker development laboratory. Fritz Hecker Sr. remarked, “Paint makers were highly respected and well-paid people. At work, they wore dirty leather aprons; after work, top hats and tails. It made sense, since, if the man made a mess of his work, the whole business could pack up.” All the raw materials came from Britain and for decades the recipe was given in imperial weights and measures.

In his memoirs, Fritz Hecker Sr. described the situation of the German paint industry at the time when ACVC was founded: “In those days, there wasn’t a single German paint factory capable of matching the quality of foreign products, and it was absolutely futile to attempt to sell German paints to reputable German motor manufacturers. The response was a blunt and categorical ‘No!’ (...) The standards were exceptionally high, which is understandable when one considers that the paintwork on a noble carriage of the day, open or closed, with an elegant and brilliant finish took three to four weeks to apply. A single misplaced brushstroke or an insect



■ View of the Spies Hecker plant site, ca. 1925.

or speck of dust in the final coat necessitated endless and costly rework. Highly elegant painwork was in fact a fine art and was only entrusted to the hands of exceptionally capable and experienced painters. (...) The preferential position of British paints was attributable, firstly, to long-standing traditions, i.e. first and foremost to in-depth experience, combined with extensive factory installations and huge tank farms which were kept constantly at the right temperature. This way it was possible to store these fine paints for years to allow them to clarify and mature to perfection. In those days, filtration was still unheard of, and years of storage were required instead. British paint manufacturers also benefited from access to the best raw materials from the copal markets in their colonies and to the best-suited crude linseed oils from India or the Baltic nations. Suitable drying agents had been used successfully for decades. Perhaps it was an effect of the bracing British air. Who knows?"

Alternative substances were still unknown. The best-quality paints were based on copal. The best copal, from Zanzibar, was pale red to yellowish red, as hard as amber and odour-free. The pieces had a glass-like consistency. Copals were initially cleaned and washed by hand. After this, they were heated on open fires to 300–400 °C to expel the volatile copal oils. Dirt and inclusions were skimmed off during boiling. Melting at that time was still a wholly unscientific process, and depended on the judgement of the experienced paint maker. A copal was considered fully molten when, after bubbling up several times in the usual way, the liquor slowly subsided and the liquid ran quickly down the mixing rod. Because of the intensity of the fumes given off by the distilled copal oils “you could hardly see your hand in front of your face,” Fritz Hecker Sr. recalled, describing the melting process.

With the addition of drying oils such as linseed or wood oil, the paint was boiled until it became



■ *The railway industry was an important customer for Spies Hecker.*

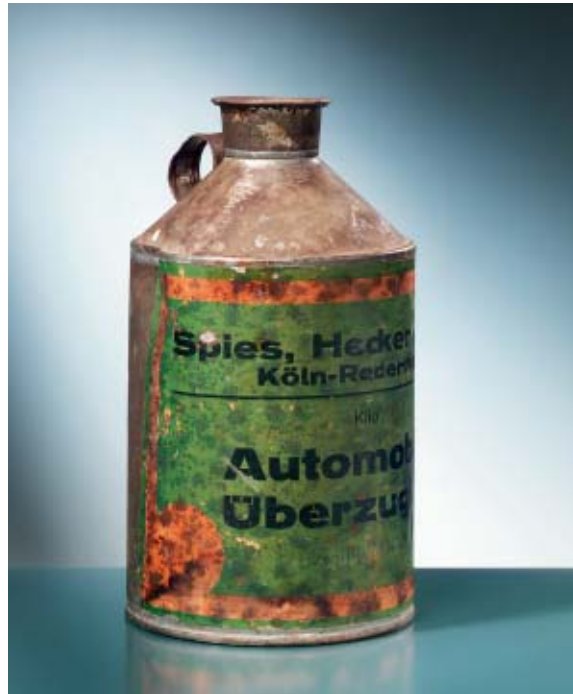
stringy. Taken from the fire and cooled, the mixture was thinned with turpentine oil and thus obtained its brushable consistency. The powdered colour pigments – mainly inorganic in the early days – were ground (dispersed) so finely on cylinder mills that they were fully wetted by the binder or matrix. So that coarser lumps of pigments and foreign matter could settle, the paints were stored for years to “mature”. Only then were they poured into cans of up to 25 kilos and sold.

The growth in production of industrial goods – from bicycles, horse-drawn carriages, locomotives, factory gates, kitchen tables, sewing machines and toys – brought with it stronger demand for paints. Everything needed a coat of paint to protect it from the weather and general wear. The colours delighted the buyer’s eye and encouraged sales. The paint industry thus underwent rapid expansion in the latter half of the 19th century.

The newly founded varnish company in Raderthal was no exception. In the first two decades of its existence, it mainly produced coach varnishes, wagon paints, locomotive paints, freight car paints, seat paints, paints for interior and exterior decoration, siccatives (to accelerate drying), and putties. It was during this period that they first supplied toolmakers and machine builders with protective paints. This was due to the sales strategy of the initial years under which it was the sales representatives who established contacts with potential customers. These representatives working on commission were of course keen to develop all possible business avenues and made efforts even in these early years to conquer the industrial sector. Dr. Fritz Sadowski said, “At the end of the 19th century, oil paints were based on natural resins such as copal, dammar, shellac and wood oil. They were applied with a brush, and pumice was used for sanding.”

The paint factory’s illustrious circle of customers included the Reichsbahn (German Railways), the Royal Prussian, Royal Bavarian, Royal Saxon and Grand Ducal State Railways, many private railways and tram companies, and Germany’s leading freight car and locomotive manufacturers. However, the state-owned companies formed only a part of Spies Hecker’s clientele. The painting and decorating, bodymaking and vehicle refinishing trades, the toy industry and furniture makers also used the fine paints from Cologne. Dr. Fritz Sadowski said: “Until after the First World War, Spies Hecker had an extremely wide range of business. There was nothing that the company didn’t make.”

The first products from Spies Hecker were launched on the market in ca. 1900 under the brand name of PERMANENT – at the time still described as “bright Japanese colours” – and PERMANENTWEISS (white). Fritz Hecker Sr. recalled how these paints came about: “I soon succeeded in formulating an



■ **PERMANENTWEISS:**
The first product brand
was a top-quality white
enamel paint.

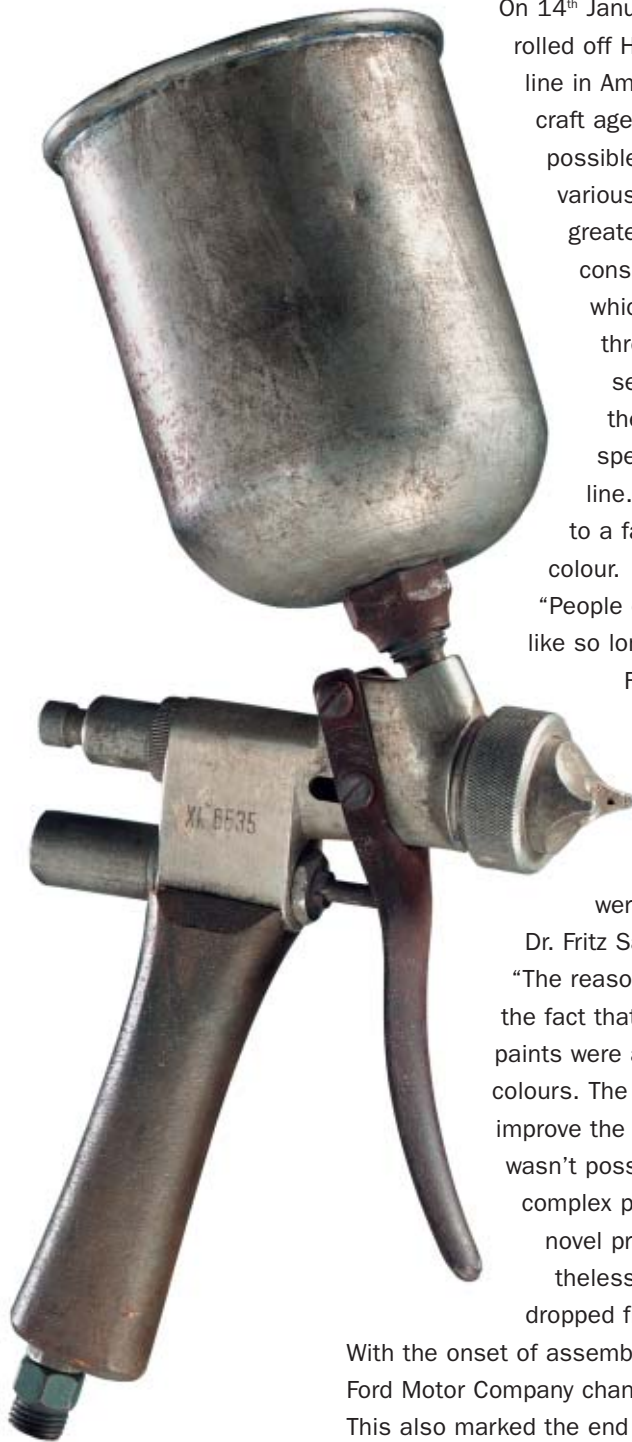
■ **Paint can from the
Twenties** containing
clear coat.

outstanding white enamel paint by the name of PERMANENTWEISS which was well received, even by the most discerning consumers. In response to my special request, the Spies brothers had obtained for me a huge consignment of samples of eight celebrated white paints from Britain and America, and my paint was modelled on the best of these.” The special advantage of this paint was its exceptional durability combined with an accelerated production process and a lower cost of materials. In just a few years, Spies Hecker conquered the market with its PERMANENT paints. Thanks to the selling skills of Fritz Hecker Sr. major plant expansion became necessary to keep pace with demand.

Along with this trend, the chemical industry was experiencing a gradual upturn. Early in 1904, large German chemical companies like Bayer and BASF were cooperating in order to share investment in their research. The goal was to manage to compete

with the countries able to obtain resources from their colonies. In German laboratories, for instance, work was underway on such substances as artificial rubber and artificial indigo – and also on a substitute for the resins that were not always available and were very expensive.

At the time the company was founded, which coincided almost exactly with the date of the invention of the motorcar, the first motorised vehicles were painted. The cars in this period of German industrial expansion, known as the “Gründerzeit”, still looked like their horse-drawn counterparts. The only difference was that these cars had engines. Until about 1920, cars were still reminiscent of the old carriage. The coachwork was made of wood and covered with artificial leather. The painter’s job was to paint the bonnet and mudguards, which were made of sheet metal.



On 14th January 1914, the first car rolled off Henry Ford's assembly line in America. This brought the craft age to an end. It was now possible to synchronise the various production steps with greater precision, but the time-consuming painting process, which took an exasperating three to four weeks, represented a major obstacle to the increase in output and speed from the production line. Ford therefore resorted to a fast-drying Japanese colour.

"People can have any colour they like so long as it's black," Henry Ford is quoted as saying. Which illustrates the problem. The first "Tin Lizzies", as the Model T was affectionately called, were only available in black.

Dr. Fritz Sadowski explains, "The reason for this lies solely in the fact that the first fast-drying paints were asphalt-based Japanese colours. The asphalt was added to improve the paint's durability." It still wasn't possible to reconcile the complex painting process with the novel production methods. Nevertheless, the price of a Model T dropped from 850 to 370 dollars.

With the onset of assembly line production, the Ford Motor Company changed over to steel bodies. This also marked the end of brush application.

Nitrocellulose paints.

■ While Germany was still recovering from the First World War, America played another trump card. Chemists at DuPont succeeded in finding out how to process the nitrocellulose left over from wartime production of gunpowder into paint binder. This nitrocellulose paint consisted not of oil and resins but of nitrocellulose, solvents and plasticisers, making it very similar to celluloid. This marked the first breakthrough. The outcome was a new generation of paints with an incredible advantage over existing paints in that they dried physically due to the rapid vaporisation of the volatile solvents.

Sadowski: "These nitrocellulose paints were matt and had to be buffed up with polishing paste and a linen cloth in its applied and dried state." All the same, the painting process itself posed problems, as this type of paint was not suitable for brush application. A new form of application had to be found.

In fact, this second innovation of immense importance for the revolution in painting already existed. And again, it came from America. The doctor Allen DeVilbiss had developed an apparatus for spraying medicine into the throat in about 1890. His son Tom now modified this device into an atomiser for paints. Combined with the novel paint, this innovative technology now set out to conquer the world. The advantages of nitrocellulose paint were its fast drying, ease of sanding and the high gloss achieved with polish and cotton wadding. However, this form of nitrocellulose known as guncotton was extremely dangerous to handle. It was essential that it didn't dry out and was therefore supplied moistened with alcohol and stored at Spies Hecker in bunkers outside the factory site. Processing them on the cylinder mills, where the pigments were wetted with the binder solution, posed a serious fire hazard, and minor fires and explosions were by no

■ One of the very first gravity-flow cups.

means rare. It was now also possible to produce preparatory materials – adhesion primer, surfacer, putties, etc. – with the aid of this binder, as chemists were now capable of producing plasticisers, solvents and synthetic pigments on an industrial scale. Spray guns, spray booths, extraction devices and cleaned fresh air became the essentials for an outstanding paint finish.

It took a great deal of courage to go into business with nitrocellulose, but nevertheless Spies Hecker was quick to respond, modernised its production installations and changed over part of production before the 1920s were over. The nitrocellulose department was established and the first series of nitrocellulose paints came onto the market under the brand name of PERMALOID. However, in addition to higher pollution and fire hazards, these paints had another major drawback; they were not weather-resistant. Due to the degrading of the binder, the paint soon became dull. The vehicles therefore had to be regularly polished – with the result that the top film coat did not last long. However, the arduous polishing was not usually the job of the car owner. Purchasing a car in those days was for the more wealthy and prestigious customer and the vehicles in the early era of the motor car's history were often supplied together with a chauffeur. In addition to being a chauffeur



■ Brush application, ca. 1910.

■ Colour sample book for PERMALOID nitrocellulose paints at the end of the Twenties.



■ Paint cans:
PERMALOID nitrocellulose paint,
PERMANAL synthetic resin paint.



■ *Paint laboratory with funnel mills in the Thirties.*

■ *Paint production with powerful stirrers in the Fifties.*

he was also usually the mechanic and the polisher. It was only when the chauffeur was unable to achieve results with his polishing cloth that the paintwork had to be renewed. The vehicle refinisher was faced in those days with a testing task, as colour matching was an art which required professional attention.

The choice of colour was still very limited. Most vehicle manufacturers initially offered the customer only solid colours such as red, blue and green, and the finished paintwork fell well short of today's standards. The new paints and the change in application methods also forced the refinisher to acquire new skills.

Painting techniques had moved into the modern age, but working conditions were still characteristic of the 19th century despite the advancement in technology. Rolf Hecker explained, "The entire factory was pervaded by the smell of turpentine oil. Men with thick leather aprons stood at open fires and melted copal in large 1,000 litre boilers. Every sack of pigment had to be carried by hand and was

added according to the recipe. Each can of white enamel was filled manually on the scales. Cleaning the paint boiler was a difficult task too in those days. Employees climbed into the boilers and scratched off the paint residues with stripping pastes and scrapers. Although there was plenty of fresh air, little importance was attached to occupational health. If an employee complained of a headache, he would be sent outside into the fresh air for a while."

Synthetic resin paints.

■ In 1927 a new binder – alkyd resin – was developed in the United States. Now that it was possible to modify this resin with fatty acids, it could be used as a paint resin. And again Spies Hecker wasted no time. Thanks to the forthright action of Fritz Hecker-Over (FHO), the company developed its first synthetic resin paint. At the end of the 1920s, Spies Hecker launched the PERMANAL brand. "Without recoating and if applied in a sufficiently thick film, PERMANAL is weather-resistant for six



months, even on exposure to aggressive maritime air. It is outstandingly suited to the protection of iron and roughened aluminium from corrosion as well as being equally suited to wood,” is how the company enthused about and promoted its flagship product.

“Synthetic resin paints marked the beginning of the modern but also complex new age of paint development,” explained Dr. Fritz Sadowski, describing the impact of synthetic resins. The early 1930s in Raderthal were largely dominated by the systematic development of such paints. Production was now dependent on large-scale laboratory research that paint manufacturers had to perform themselves. Fritz Hecker-Over had built laboratories early on, recruited chemists, built bunkers for the nitrocellulose and organised fire prevention in the company.

In the 1930s, Spies Hecker also developed melamine and urea stoving enamels under the PERMANAX brand. These didn’t yellow as strongly and permitted lighter colours.

In 1932, in celebration of its 50th anniversary, the company treated itself to a new, regal product. This was “Die Krone am Rhein” (The Crown of the Rhine), a white Japanese enamel for interior and exterior decoration. The company described this new “anniversary” product as being “easy and smooth in its application, of good opacity and impeccable flow, full and rich like noble porcelain, snow-white in colour, of high yield and excellent drying, highly elastic and resistant to the weather.” It was probably around this time that titanium dioxide (TiO₂) was discovered as a high-opacity white pigment for paint production.

From the mid-1930s, the equally rich alkyd resin paints replaced conventional oil paints in many fields because of their faster drying. Nitrocellulose paints also dried quickly but were not as resistant to the weather. Another disadvantage of nitrocellulose paints was that, because of their low solids content, they required more coats to achieve a certain film thickness and had to be polished as well. The path forward proved to be the combination of

■ *“The Crown of the Rhine”. A white paint for indoors and outdoors was developed in celebration of the company’s 50th anniversary.*

■ *PERMANENT colour chart for the painting of railway and tram carriages, luxury carriages and motor cars, and for the performance of all decorating tasks of 1928.*



■ *Hamburg repair shop in the Thirties.*

nitrocellulose with an alkyd resin. The outcome of this was PERMALOID nitrocellulose combination paint, whose paint properties were somewhere in the middle. At the same time, the first attempts were made to accelerate film formation in a heated drying booth. At last, refinishers had a choice of the most suitable paint material.

During this period, new, brighter and more weather-resistant pigments made exciting new colours possible. Škoda, Tatra and Lancia were among the

first car manufacturers to present vehicles in a striking metallic finish at the beginning of the 1930s. This made use of suspended aluminium flakes, and replaced grey, matt stove bronze paint, which floated on the film and caused detachment of the pigments when the paint surface was wiped.

Little can be said about the war years. Production was essentially dictated by the demands of the armaments industry and by shortages of materials.

Chronicle of developments in vehicle refinishes.

Paint	Application	Drying*
Coach paints (19th century)	Brush	6 – 8 weeks / 20 °C
Japan paints (from 1900) PERMANENT	Brush	2 – 3 weeks / 20 °C
Nitrocellulose paints (from 1920) PERMALOID®	Spray gun	30 – 60 min. / 20 °C
Alkyd resin paints (end of the Twenties) PERMANAL®	Brush Spray gun	1 – 2 days / 20 °C
Nitrocellulose combination paints (from 1935 to the Sixties) PERMALOID®	Spray gun	2 – 4 hours / 20 °C
Alkyd resin paints (oil-modified) PERMANAL® (end of the Forties to the Eighties) PC/CV Series 200/210	Spray gun	4 – 6 hours / 20 °C 60 min. / 60 °C
80-degree paints (interim solution) PERMANAL®-80 °C (the Sixties)	Spray gun	30 – 45 min. / 80 °C
2K acrylic paints Medium solids PERMACRON® MS/PERMAFLEET® PC Series 257 (1975) CV Series 260 (1989 – 1997) CV Series 620 (1997 – 2007) CV Series 630 (from 2004)	Spray gun	25 – 30 min. / 60 °C 30 min. / 60 °C 30 min. / 60 °C 20 – 30 min. / 60 °C
Base coats PC Series 293/295 (from 1980) + MS Clear Coat		15 min. / 20 °C 20 – 30 min. / 60 °C
High solids PERMASOLID® HS/PERMAFLEET® PC Series 270 (1998 – 2007) PC Series 275 (from 2007) CV Series 250 (1990 – 1997) CV Series 650 (1997 – 2005) CV Series 670 (from 2004) CV Series 675 (from 2004)	Spray gun	30 – 40 min. / 60 °C 20 – 30 min. / 60 °C 40 min. / 60 °C 30 – 40 min. / 60 °C 20 – 30 min. / 60 °C 20 – 30 min. / 60 °C
Nitrocellulose, alkyd, acrylic, EP, PUR PERMAFLEX® Industry Series 520 – 570 (from 2007)	Spray gun	8 – 60 min. / 60 °C
Waterborne base coats PERMAHYD® PC Series 280/285 (from 1994) + MS Clear Coat	Spray gun	20 min. until matt
PERMASOLID® HS Clear Coat or UV Starlight Clear Coat (from 2006)	Spray gun Spray gun	20 – 40 min. / 60 °C 1 – 2 min., flash lamp

PC = passenger cars
CV = commercial vehicles

* Drying time until ready for use / assembly

Temperatures refer to object temperature



■ Conference of departmental heads in 1952.

From left to right: Dr. Siebert, Mr. Meier, Mr. Dibbert, Mr. Kämer, Mr. Bosgard, Mr. Horn, Mr. Kirchner, unidentified (standing), Paul Adolf Hecker, Mr. Latzen, Fritz Hecker-Over, Mr. Brauch, Adolf Hecker, Mrs. Tamm, Mr. Löwer, Dr. Herrmann, unidentified, Mr. Katzenmeyer, Dr. Hauck, Dr. Schlagwein, unidentified.

**Family and company history.
Spies Hecker 1945 - 1971.**





■ 1948: Building work at the company site in Cologne-Raderthal.

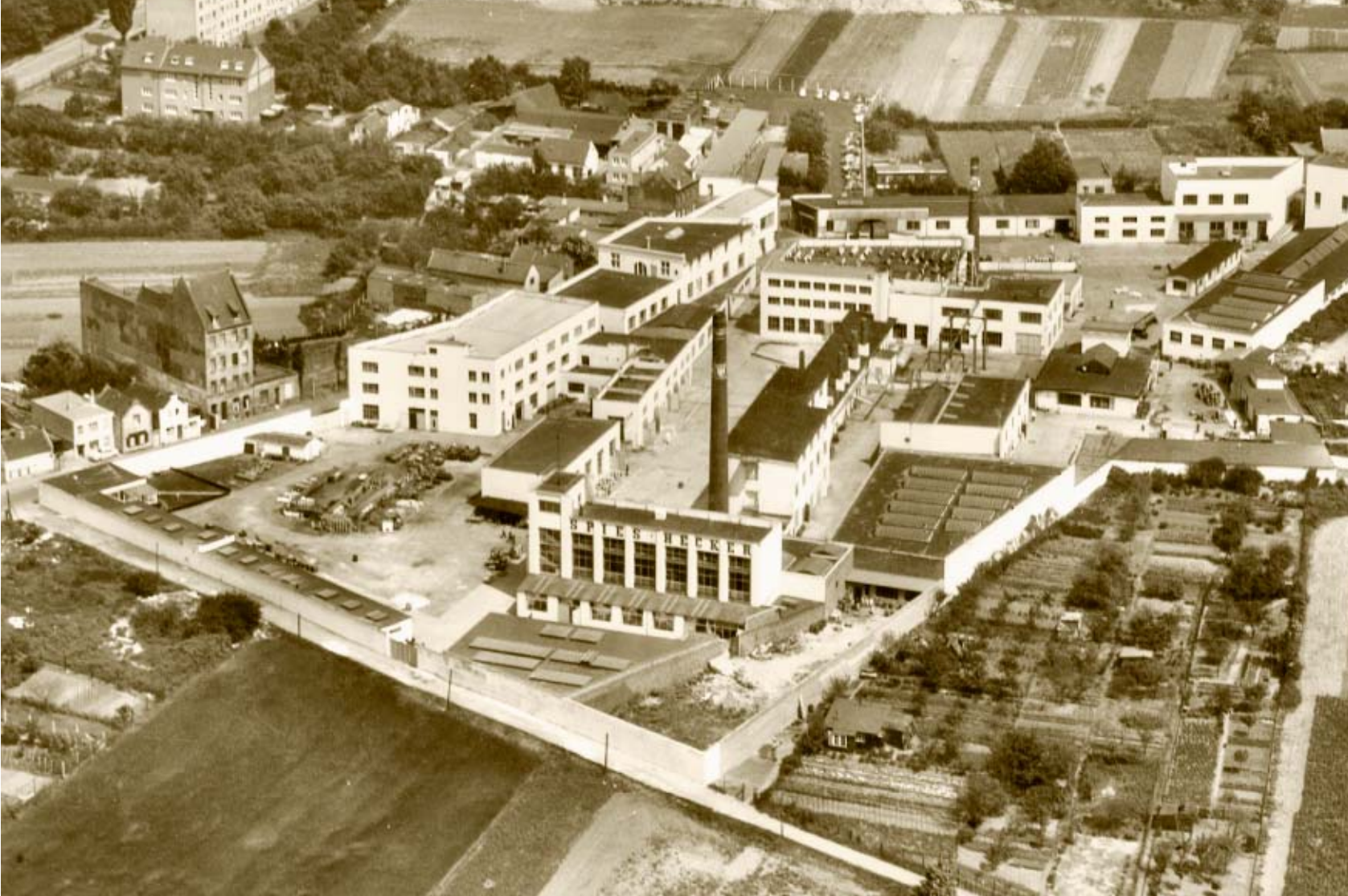
Reconstruction.

■ By the autumn of 1945, Germany had lost the war. The German people were traumatised and vast areas of land had been reduced to rubble. The country's infrastructure was almost destroyed. There was a shortage of homes and food, with supplies to the population in a catastrophic state. The greatest concern was personal survival. Daily food rations were now smaller than those in war years, many went hungry. Sometimes it wasn't even possible to distribute the tiny daily ration. The Allies had to lower the calory rates several times. Many therefore exchanged food on the black market or hoarded food in the country. The most sought-after method of payment was in American cigarettes. Relief of unquestionable importance came in the form of CARE parcels sent from the USA to Germany from 1946 onwards.

War damage, lack of organised industry and the destroyed infrastructure were a huge burden on

the economy. Spies Hecker found itself having to start again almost from scratch. Fritz Hecker-Over described the state of the company in 1945 as "in ruins. A huge shortage of glazing and roofing materials, no electricity, no gas, no raw materials, no money." 80 per cent of the company installations had been destroyed. However, rather than lamenting, the people in Cologne-Raderthal rolled up their sleeves and got on with the task of rebuilding their lives. Rolf Hecker described the situation: "Despite all the setbacks, one thing remained, the optimism that had already inspired company founder Adolf Hecker in 1863."

Right at the top of the list of priorities was not only the reconstruction of the company, but also the sense of social obligation of the Hecker family and its staff. After the war, Spies Hecker became a focal point for men returning from the front. Whenever a train with homecomers arrived at the station, company employees welcomed them back and took



■ Company site in 1955.

care of all the official formalities. Among them were Helena Müller and Günther Dünnwald from the advertising department. The former, a business economist, recalls, “The people were starving, sickly, had no clothes and were unwashed. At the station mission they were initially given something to eat and drink, after which they had their first contacts with the authorities.” Even customers from the former Eastern regions of the German Reich contacted Spies Hecker about their lost dependents; before fleeing they had agreed to inform Spies Hecker should they ever become separated.

Those returning also included members of the Hecker family. Fritz Hecker-Over was called up before the outbreak of war, and as a captain, had led the anti-aircraft artillery near Brauweiler, West of Cologne. In 1944, at the age of only 16, his son Rolf was sent to the front as an air force auxiliary. One year earlier, his family’s house in Kaiserstrasse, Rodenkirchen, had been totally destroyed.

Rolf Hecker was captured by the Americans in Andernach and returned home unscathed. The family was first taken in by friends and in 1946 moved into the company’s premises. Rolf Hecker described the time immediately after the war: “Everywhere looked dreadful. I remember helping to chip cement off old bricks. Very little was still standing. There were still a few older buildings which had also been damaged. They were repaired in a makeshift fashion. The supply of raw materials at this time was entirely dependent on the Americans. Olive green was the only paint colour produced.”

Reconstruction work in Raderthal proceeded very slowly. Nevertheless, although the company had only ten employees and a small number of work groups scattered throughout Germany in 1945, 53 white-collar and 65 blue-collar workers were employed by Spies Hecker by 31st December 1946. Annual sales came to 3,057,000 Reichsmarks.



■ PERMANAL colour mixing shop.

The fact that sales fell to 2,846,000 Reichsmarks in 1947 was attributed by management to insufficient supplies of raw materials. Despite the drop in sales, the workforce grew to 125 employees. The report on the 66th year of business in 1947 gives an excellent impression of the difficulties associated with rebuilding the company: “Costs were inflated not only by output limited by the shortage of raw materials, but also and more importantly by a visible drop in the performance of manpower working actively in production. The other operating expenses also rose in price considerably. Some of the essential resources, unavailable via the normal channels, had to be obtained elsewhere at inflated prices. Equally, the cost of repair and restoration which burdened production was much higher than

before. (...) Last year, we again fell far short of completing all the planned rebuilding and repairs because of a shortage of materials. We are once more being held back mainly by the consequences of war – lack of equipment destroyed in the repair shops, the dismantling of production facilities, the business failure of key suppliers in the eastern zone, etc. It will be many years before our machine park is fully modernised and war damage has been eliminated in all the areas of production.”

By reviving old contacts, Spies Hecker was able to obtain lucrative orders. One of these was the production of paints for the British and Belgian military. These paints were paid for in pounds sterling, the much coveted British currency. This currency made it easier to purchase raw materials on the international markets. Things were now moving forward. In the paint melting shop, a gas generation plant was installed, and the fitters’ shop was rebuilt after being destroyed in the war, as were the first-floor office premises. With the purchase of a 3.5 ton Magirus diesel truck, the Spies Hecker fleet now had two trucks; this reduced the company’s dependence on outside freight companies. Old customers had remained faithful to the company in Raderthal. All that was lacking was the volume needed to satisfy customer demand.

From 1948 onwards, the company grew steadily. Tangible progress was being made. A new, modern company building was erected. The attic contained Fritz Hecker-Over’s private flat, and on the roof terrace, the family installed its own skittle alley!

■ Old entrance to the office buildings in Cologne-Raderthal in the Fifties. This door is now on display at the Spies Hecker Center.



■ Above: Company site in Cologne-Raderthal after reconstruction in 1948.



■ Main entrance.



■ View of the site: laboratory building on the left and sales on the right.

A big family.

■ The workforce continued to grow steadily. The younger generation soon appeared. Apprenticeships were in big demand in the immediate post-war years. Amongst the first apprentices in Raderthal was Ernst Lucas who, in 1946, after military service and three

months as a POW, completed the higher commercial school and was unemployed at the age of 19. He recalled: "I was sent by the Employment Office to Spies Hecker and thought at first it was a can factory." Highly impressed by the gigantic offices of company owners Paul Adolf Hecker, Fritz Hecker-Over and Adolf Hecker, the young man took his apprenticeship



■ *Tinting area.*

■ *Company celebration in the PERMANAL production shop.*

contract home with him. “It had to be signed by my mother, as at this time 21 was the age of consent. I was paid 36 Reichsmarks per month. On 30th June 1948, I received my first wage in Deutschmarks – 170 marks, half the value of a suit.” Lucas was later given full commercial authority for the southern region.

Commitment and dependability were demanded of the youngest employees. Helena Müller said: “The apprentices had to be at work an hour before the others – at 6:15 a.m. Work ended each day for them at 5:15 p.m. Every employee was given a litre of milk, which the apprentices distributed before work. On Saturdays we worked from 6:15 a.m. to 2 p.m.” Particular points that an apprentice had to observe at Spies Hecker were listed in a personal letter opening with “Dear Friends!” Here’s an extract: “You only have to demonstrate your honest determination to muck in. The tasks expected of you in the trade you are learning are different from those at school. However, there is no need to be apprehen-

sive, because none of you will ever be asked to do more than you are capable of. (...) Make sure you are punctual at all times. This is a virtue befitting not only kings, but also apprentices. (...) For work in the office, all you need is a white coat to protect your clothing. Those of you employed in the shops must of course wear overalls to protect you from stains, etc. (...) For all young people embarking on their careers, the working hours, much longer than school hours, will mean greater physical effort. This applies all the more to female apprentices. In the course of your training, you will have to remain seated for hours at your workplace. You will need physical exercise to compensate. There will be an opportunity for this every Wednesday afternoon under the direction of a qualified PE instructor.” There is no doubt that young people at Spies Hecker were in good hands.

Everyone got along fine, said Helena Müller: “The atmosphere at work was excellent. Although we had respect for our heads of department, the doors were

always open. It was possible to go to the senior managers at any time.” This was in fact a duty – once a month, when the salary was paid. Conrad Röthgen, who joined Spies Hecker as a paint laboratory technician on 1st February 1950, gives a brief version of the monthly paydays: “All the employees received their money from Paul Adolf Hecker personally. The various departments received a phone call at the end of the month and were called to the boss. One after another we had to go into his office and receive our money in a packet. He exchanged a few words with us too. We were asked about our health and our families. This was the procedure for several years. The white-collar workers wore white lab coats, even in the offices. The boss too was never seen in

didn't receive their wage packet from the hands of their various bosses. Instead, the money was taken by an apprentice on his bike to their wives – which undoubtedly contributed to more peaceful marital relations.

Unusual measures were taken where Messrs. Hecker and their family members were concerned. Conrad Röthgen explained: “I had been with the company for two or three years when BMW introduced a smart convertible. The wife of Fritz Hecker Sr. ordered one for herself. At that time, you could choose the colours for such vehicles. So I travelled with two senior painters to Munich for four days where we painted the car on the assembly line in two shades



a suit!” For blue-collar staff there was a wage office. The money was slipped into envelopes by apprentices and then brought to the various heads of department, who distributed the money.

Excluded from this procedure were employees who tended to stay a bit too long in their local pub. They

of metallic. Upstream and downstream, the Isettas rolled off the assembly line.”

At the beginning of the 1950s, “Spies Hecker made pretty well everything,” Röthgen recalls: “Car paints, decorating paints, road marking paint, paints for rail car construction, can coatings, wood paints, indus-

■ *Offices and advertising department in the Sixties.*



■ Management office.

trial coatings and paints for special superstructures – fire service vehicles, buses and trailers.”

In 1952, the 79-year-old senior boss Fritz Hecker, Honorary President of the Association of the German Paint Industry, handed over the reins to his sons Fritz Hecker-Over (FHO) and Adolf Hecker and to his nephew Paul Adolf Hecker (PAH). He commemorated his departure with a big company celebration – a boat trip on the Rhine. The much admired senior boss, who had made Spies Hecker known all over Germany, died the same year. “He was a very kind, fatherly person,” Helena Müller remembers. “He was an entrepreneur of the old school – but he

could also sing and recite poems in the canteen,” enthuses Ernst Lucas. A year later, in 1953, the fourth generation joined the management in the shape of FHO’s son Rolf Hecker. “I was initially concerned with modernising production, some of which was still very old-fashioned, and introducing new methods,” said Rolf Hecker. In 1956, he travelled to the USA for the first time – “in an endeavour to discover new and improved methods of paint production. They already had large ball mills,” explained Rolf Hecker. He returned from the States with a piece of equipment called a sand mill – a mill filled with sand into which paint was pumped. Spies Hecker obtained licences for this DuPont invention.



The economic miracle.

■ Unlike East Germany with its Socialist economy, West Germany fortunately had a sound market economy. The young Federal Republic's ties with the West and its integration in the world economy favoured its rapid recovery in the 1950s. The economy was booming worldwide. While production and export figures were rising sharply, the unemployment rate in West Germany dropped to less than one per cent in 1961. The population's standard of living improved rapidly. Growing affluence changed the aspirations and living habits of consumers. Luxury goods such as electrical household appliances and a car of one's own were much in demand and came top of the "shopping list". The economic miracle was embodied by, more than anyone else, Ludwig Erhard, Economics Minister

under Chancellor Konrad Adenauer. His slogan was: "Affluence for all!"

As the car industry flourished, so too did the paint industry. The growing number of car owners meant a higher demand for vehicle refinishes. Spies Hecker spotted this trend and responded swiftly. At the beginning of the 1950s, the company built a hall with state-of-the-art equipment, including a spray booth for vehicle refinishing. The company's product range in the Fifties included paints and coatings for virtually every conceivable application, based on a wide range of raw materials. The growing circle of customers included car and body makers, the painting and decorating trade, furniture painters, rail car manufacturers, the German Railways, the German Post Office, various transport companies, national and local government, shipyards, the chemical

■ *Senior staff in 1950.*

■ *Fritz Hecker Sr.*



■ *Painting lettering on vehicles in the Fifties required genuine craftsmanship.*

industry, heavy industry, the coal, iron and steel industries, mineral oil refineries, tank and apparatus engineers, can and sheet metal goods producers, the food and beverage industry, the textile, paper and leather industry, production plants for pharmaceutical and cosmetic products, manufacturers of commercial and household machines, toy manufacturers and makers of agricultural machinery.

In its capacity as a consumer paint manufacturer that directly supplied commercial consumers and not the trade, Spies Hecker developed into the biggest company of its kind in Germany. The company employed 45 field service employees who promoted the company's products and 22 field stores employees who ensured rapid delivery. The company's close distribution network laid the foundation for further success.

Spies Hecker consistently expanded its distribution network and approached neighbouring European countries to extend the business. Export business was based on a small number of bulk purchasers such as Bell-Telefon in Belgium and Philips in the Netherlands. The task now was to put exports of vehicle refinishes onto a sound and broad basis. Business with vehicle refinishes achieved good operating results. The idea was for exports of PERMANAL car paints and preparatory materials – primers, putties and surfacers – to grow significantly. Export sales rose rapidly and had achieved DM 4.5 million by 1968. This amounted to about ten per cent of Spies Hecker's total sales.

From 1955, importers with marketing and sales responsibility for their respective countries were



■ Sales conference in 1952.

sought and found. This was the case in the Netherlands, Denmark, Norway, Sweden, Finland, Luxembourg, Belgium, Switzerland, France and Italy.

In some countries it was necessary to change tactics several times as the partners concerned were unable to accept overall responsibility. This was particularly the case in large European countries like Italy and France. These were markets in which Spies Hecker ultimately took responsibility for activities by founding such subsidiaries as Italpermanal and Permanal France. Business from the award of licences for products patented by Spies Hecker also developed during the same period. The licences were awarded for the production and application of so-called Kontak processes. These were associated with polyester paints for the audio and furniture industry in Finland, Norway, Brazil, Italy and South Africa.

Carnival in Cologne – “De Pooz bliev zo!”

■ Once a year, conventional rules and procedures were suspended whilst Carnival was celebrated. Spies Hecker’s motto for the occasion was: “De Pooz bliev zo!” (The gate stays shut!) After the final shift on Carnival Friday (later on “Weiberfastnacht”, i.e. a day earlier), the company closed down until Ash Wednesday. The management often contributed a few marks so that everyone in the company could share in the festivities. When work resumed, there was a cheerful company circular from Paul Adolf Hecker. In 1958, it opened as follows: “I am happy to announce that the 650 men and women ‘locked out’ since Carnival Saturday in accordance with our old motto ‘The gate stays shut!’ resumed their duties today in a happy and cheerful mood. (...) The lockout signs on our factory gate

PERMANAL



AUTO-LACK



SPIES · HECKER & CO. · KÖLN



■ Main entrance to the old Cologne plant in Fritz-Hecker-Strasse.

■ 1958: Information to customers that Spies Hecker's gates would remain closed during Carnival.

have been removed. The first person to pass the company gate this morning was our post office courier with a bulging sack of business correspondence." In addition to this, Paul Adolf Hecker took the opportunity to personally welcome back his staff at the gate on Ash Wednesday.

Two of the three heads of the Hecker dynasty were actively involved in Cologne's Carnival: Paul Adolf Hecker as an honorary member of the "Rote Funken" and his cousin Adolf Hecker of the "Negerköpp". Only Fritz Hecker-Over, Consul of Tunisia and a very cosmopolitan, internationally minded man, largely kept clear of the festivities which started throughout the firm on "Weiberfastnacht" Thursday at 11:11 a.m. on the dot. The former shipping manager Heiner Ross said: "On this Thursday there were people dancing everywhere. There was also drinking, but in moderation. We were a big family." These "family members" were affectionately addressed by their nicknames. There was Heiner Ross ("Ross" means "steed" in German) who was suddenly known as "et Päd" (the horse), and others were called the "Werbefuzzi", "Knallbotz", "Anti-Alki" and "Herbse Herb". Hard-core rev-

ellers gathered in the canteen on the Thursday evening and celebrated Carnival until the next morning!

Spies Hecker company celebrations are also legendary, and were held in Cologne's Botanical Gardens or in the Heidemühle in Dellbrück. In addition, there was the much famed first boat trip to Linz on the Rhine. Heiner Ross said: "The company chartered a boat belonging to the Cologne-Düsseldorf line for whom we produced marine paint. There were approximately 1,000 people aboard the boat, including the owners' families, internal and field service staff, and customers. We arrived in Linz at about midday and everyone was given food and drink vouchers worth 10 marks. A Kölsch beer cost 10 pfennigs in those days. So everyone flocked into Linz to dance or drink wine. The boat was scheduled to depart again at 6 p.m. The captain unmoored and then moored the boat again three times because people were late arriving at the quay. One passenger who'd obviously had a little too much to drink fell into the Rhine! We apprentices were not supposed to drink any alcohol at all, but we did all the same! I was one of the last to reach the quay. The ship had gone and we had to travel back by train."

Alcohol was only officially available once a year, at Christmas. For the ladies there was a bottle of sparkling wine and for the gents a bottle of cognac.

■ 1975 advertising poster for PERMANAL car paint (synthetic resin) with a Cologne "Tanzmariechen".



■ *Carnival in Cologne.*

Both bore the “Hecker private” label. The employees in the paint shops, on the other hand, preferred a very special liquor, a clear schnapps. The drinks were stored in the wine cellar. It is said that on Fridays secret sessions were held there that were rudely terminated the next morning by wives whose husbands had gone AWOL! The sense of belonging to the Spies Hecker family among the workforce was also promoted by the annual “Open Day” with organised tours of the works. “This strengthened the team spirit enormously,” Ross explains. “We were a very happy crowd at Spies Hecker.”

Employees at Spies Hecker were well looked after. Sharing responsibility for this was medical orderly Bobenhausen who for many years was chairman of the works council. It was his job to visit the local market hall once per week to buy crates of bananas. Heiner Ross: “Everyone was given a banana and a bottle of milk – that was for our health.” At the time it was incorrectly believed that milk and bananas were an effective antidote to the toxic paint fumes. Even if the calcium ration almost certainly did nothing to counteract the toxins, it was at least wholesome as well as being delicious.

Innovative solutions – new partners.

■ By 1970, Spies Hecker had gained a market share of 24.4 per cent in the German vehicle refinish sector, producing 4,661 tons of paint. The strongest rivals on the national level were Glasurit and Herberts. Within only ten years, the company had upped its market share by a solid seven per cent. In the industrial coatings sector, Spies Hecker had a share of only 1.5 per cent (5,899 tons) and was hardly a force to be reckoned with, but nevertheless achieved higher sales in this quarter than with vehicle refinishes.

In April 1971, Spies Hecker purchased the Theodor Kotthoff paint factory situated nearby. There was good reason for this. On the Spies Hecker site, production was still being carried out in old shops. By transferring this activity to Kotthoff, it would be possible to pull down the antiquated production shops and replace them with new modern installations. In addition, by purchasing the construction paint producer, Spies Hecker planned to extend its



business into this field. Rolf Hecker explained: “When we inspected everything at Kotthoff more closely, we came to the conclusion that it would be better to demolish the whole lot and rebuild the plant, which we did. This is how Works 2 came to be on the other side of the Raderthalgürtel – Spies Hecker’s most advanced site.” The company now had 1,200 employees.

In the company agreement for the Kotthoff takeover of 22nd April 1971, “Farbwerke Hoechst AG” was mentioned for the first time in its role as a limited partner with a capital contribution of DM 1.7 million and a 25 per cent stake in Spies Hecker. The huge corporate group had acquired an interest in the company in Raderthal on 1st January 1971. The reasons were obvious. Although it had been an unwritten law that the raw materials industry as the producers of binders, pigments and additives should remain distinct from the paint industry, BASF became the first company to violate this principle in taking over a paint producer. Shortly afterwards, it also acquired the Cologne paint manufacturer Herbig-Haarhaus. This was a trend that was already com-

mon practice outside Germany. Britain’s Imperial Chemical Industries (ICI) had always operated its own paint production plants in the British territories worldwide. DuPont also owned similar firms in the USA and Europe. The competing paint producers were worried about being cut off from their sources of know-how. However, the most important reason was undoubtedly the fact that the rapid increases in the prices of raw materials could not be passed on at the same rate to customers. Nearly all paint manufacturers had cash flow difficulties and were happy to accept the rescue offers of major chemical companies in the hope that their economic situation would rapidly improve.

Hoechst showed strong interest in Spies Hecker. The company’s management decided to enter into a strategic alliance with Hoechst. The long-standing raw material supplier had put forward the best plan. In this way, Spies Hecker hoped to be better equipped to compete with Glasurit as it looked very much like conventional family businesses would not survive in the long run. Hoechst’s “strategic” 25 per cent share in Spies Hecker was in fact just the beginning.

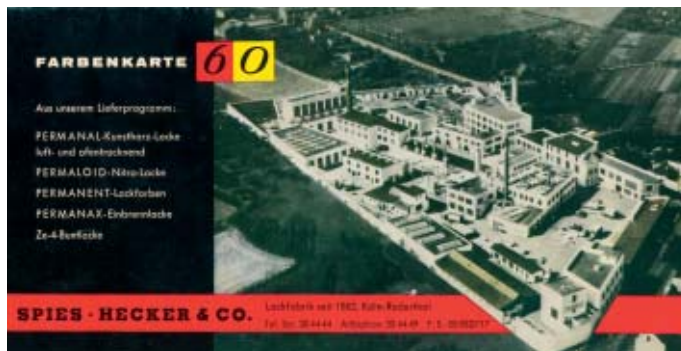
■ *Spies Hecker purchased the Theodor Kotthoff paint production plant in Cologne-Raderthal in 1971.*

■ *A new Works 2 was built on the Theodor Kotthoff site.*



**Product history.
1945 - 2008.**





■ RAL colour chart of 1960.

■ Despite the devastating effects of the Second World War, rapid advances in paint technology continued to grow. Spies Hecker was a key player in this industry, with their new PERMANAL brand, an air-drying alkyd resin paint which was soon the No. 1 preferred product in vehicle refinishes. However, dust inclusions in these early air-curing and sprayable synthetic resin paints, which were based on oil-modified alkyd resins, were difficult to remove by polishing alone. As a result, air-filtered spray and drying booths were required. Spies Hecker’s brand-new company building, comprising of analysis laboratory and hall with a state-of-the-art spray booth for vehicle refinishing based on the latest scientific findings, enabled the company to play an active part in the development of innovative technologies. The plant, situated in Cologne-Raderthal, had been almost destroyed during the war but was now nearly back to pre-war production levels. In 1954, the total site covered 23,500 square metres, 8,500 square metres of which were occupied by buildings. The solvents were stored in underground tanks. The total capacity of these installations amounted to almost half a million litres, subdivided into the boiling room (35,000 litres), PERMANAL synthetic resin (133,000 litres) and PERMALOID nitrocellulose paints (350,000 litres). These modern multi-storey premises ensured smooth-running paint production. Two filter towers with four levels cleaned the semi-finished products of all impu-

rities that were caused by colophonium, copals or collodion. The boiling or melting room contained five open and four enclosed fireplaces, with a modern boiling apparatus completing the key equipment for this production installation. The plant was protected by special fire-extinguishing systems, which were capable of covering and smothering any fire outbreak. This was achieved with pressurised nitrogen and carbon dioxide foam at a temperature of minus 78°C. The total capacity of the tanks for the finished product came to 650,000 kilos and no Spies Hecker product left production before being meticulously examined in the analysis laboratory and test paint shop.

In the economic miracle years following the Second World War, Spies Hecker also served the rapidly expanding builders of machinery and plant. In the mid-Sixties, paints were increasingly perfected and the products were customised for specific industrial painting processes. Together with various spray gun manufacturers, Spies Hecker made pioneering advances with innovative painting techniques such as airless and electrostatic application.

The economic boom meant an increase in car owners, hence the growth in demand for vehicle refinishes. Nitrocellulose was gradually replaced by synthetic resin paints of increasingly high quality. The final triumph for nitrocellulose paints was multi-film finishes



for luxury cars, where deep gloss, carefully cared for, recalled that of hand-polished limousines of a bygone era. All the same, the future belonged to synthetic resin paints, and the changeover from highly labour-intensive nitrocellulose to synthetic resin paints gave rise to a need for new technology. Conrad Röthgen remembered this period well and said, “It required a lot of explanation. Two of our senior painters were responsible for training our customers all over West Germany.” Nevertheless, even synthetic resin paints had their drawbacks. Rolf Hecker said, “They had one big disadvantage. Although they were very durable, they tended to yellow in UV light. After two years, the paint had changed and faded to such an extent that it no longer matched that of the car’s interior. This proved to be extremely costly. We had to mix a series of graduated colours so that the refinisher always had the right colour to match the degree of fading that had taken place over the years.”

Dawn of a new era.

■ The beginning of the 1960s brought many changes. Mary Quant’s mini skirt set out to conquer the world, and a four-man band from Liverpool took the music scene by storm. German parents started to worry about what would become of their children. It was the long-haired Beatles that were to unleash an



■ Painting commercial vehicles in the Sixties.

unprecedented wave of hysteria among the European youth. Everything was changing, not only in the fashion and music worlds. Developments in the paint sector were on the move. The growing number of cars on the roads led to an increase in accidents resulting in an increased demand for vehicle refinishes. The desire for greater efficiency and faster drying and curing was met with 80-degree paints. With Dr. Sadowski in charge of product development at Spies Hecker, a new trend towards a modular system of base material and hardener was launched. This was the birth of two-component (2K) technology, a revolution in the refinishing trade. The goal was higher repair quality and efficient application, whilst at the same time the application technology department was founded. Conrad Röthgen, who later became



■ *Application technology department.*

■ *Analysis laboratory.*

head of the department, said, “Application technology was in charge of quality control and compared the product with rival products.” By the end of the 1960s, the first man had walked on the moon, and the number of OEM colours continued to grow! 1,500 colours in 1966 had grown to 2,500 by 1970. This fact necessitated the establishment of Spies Hecker’s colouristic department and the introduction of colour measurement. Here again, the team, later led by development head Dr. Fritz Sadowski, laid the foundations early on for precision colour management.

It was he who, at the age of only 30, perceived the need for an application technology department for industrial coatings, which he built up alongside the application technology for car paints. “In those days, there were various test results but no systematically organised paint system recommendations for certain substrates and applications. Together with Günter Berschel, the newly recruited application specialist for industrial coatings, we started from

scratch, applying paint systems on the various substrates encountered in industry. These panels were then subjected in parallel to the various short-time and long-time weathering tests and were assessed on a variety of scores at regular intervals. Three years later, in 1967, we were able to supply the sales department with detailed folders of tested paint system recommendations.”

“However, the secret of success in the industrial coatings sector was not to produce special products for each bodyshop, but to provide a regularly replenished line of products with a huge range of applications for the segment of small and medium-size industrial coating customers. It then became possible to integrate these industrial coating customers in the logistics chain of the vehicle repair sector,” as Günter Berschel, head of the application technology department until 2007, explains. The outstanding products were the textured and hammer-finish paints that offered customers in the early years of industrial



■ Revolutionary 2K technology was introduced in the mid-Seventies (picture from 1982).

coating big potential for rationalisation. By developing textured and hammer-finish paints, Spies Hecker managed to secure technological leadership in this special paint application field for many years. Colouristic was running smoothly, the testing equipment was centrally organised, the industrial coatings laboratory had its own application technology department, the analysis laboratory was supporting the various development laboratories and strict product control ensured consistently high product quality.

To achieve optimum results, refinishers were already using 2K preparatory materials such as wash primer, epoxy primer, polyester putty and surfacer from Spies Hecker. In addition, 2K polyurethane (PUR) surfacers and top coats (PERCOTEX) permitted highly chemical-resistant paint finishes. The refinisher was quick to learn how to apply 2K materials, and it was not long before the precise mixing ratios and pot lives were mastered. Spies Hecker responded to these needs with regular training events.

The paint revolution: mixing systems and 2K technology.

■ The 1970s marked a turning point in the history of Spies Hecker. The company joined forces with Hoechst (see the chapter “Tapping new markets”), research and development were reorganised, and production processes underwent further modernisation.

The launch of acrylic-based 2K technology was a sensation for the refinishing trade. In Germany and elsewhere abroad, it was soon realised that acrylic had significant advantages over synthetic resin technology in terms of paint application. Dr. Fritz Sadowski said, “If one considers the introduction of paint spraying as the first technical revolution in vehicle refinishing, the launch of 2K systems was the second, because now precise mixing ratios had to be observed.” The entire refinishing trade gradually changed over to this technology, although the rate of changeover varied greatly from country to



■ 1975: The first PERMACOLOR mixing system with a micro-fiche reader came onto the market.

country, depending on the open response to innovation and the willingness to invest.

The new 2K acrylic paint technology was marketed at Spies Hecker under the PERMACRON brand with the serial numbers 257 for top coat and 293 for base coat for a two-coat finish (base coat / 2K clear coat). By this time, the company had about 3,000 ready-mixed colours at its disposal. In 1975, Spies Hecker brought the first mixing systems onto the market. This was initially the PERMACOLOR mixing system for synthetic resin (PERMANAL) and, a short while later, for 2K acrylic paint (PERMACRON Series 257 and 293) as well.

Base material and various hardeners, accelerators, matting agents, elasticising agents and other additives became elements of an extremely versatile modular system that required little storage space. Spies Hecker soon realised that mixing systems and modular technology encouraged lasting customer ties, as the customer could mix all the colours and

obtain specific paint properties themselves with the mixing machine. As a result, they only required a single paint manufacturer rather than several. “The introduction of mixing systems and the new technology of 2K paint injected new life into the market and accelerated the replacement of synthetic resin technology in the ensuing years,” explains Herbert Born, at this point group manager in the export department.

It should be mentioned that Spies Hecker was producing Permatex high-strength anti-corrosive paints at its subsidiary in Asperg, Württemberg. These products were mainly used in wet environments such as breweries, dairies and the chemical industry. In this specialised field, Permatex had acquired a key market position.

Another subsidiary was Teppitex Chemische Produkte GmbH. It supplied floor coatings for post-war housing and later interior and exterior paints along with



Unitherm, a flame-retardant system for steel structures.

Karlheinz Steimel, who was the marketing, sales promotion and PR manager for car paints until 1973, recalls, "It was soon realised that trade marks and brand names were important for a market-oriented company. PERMANENT, the first brand name, was introduced in 1900. Over the years, this was followed by memorable names, most of which contained a reference to the basic material or use after the 'PERMA-' prefix for durability."

Spies Hecker brand names:

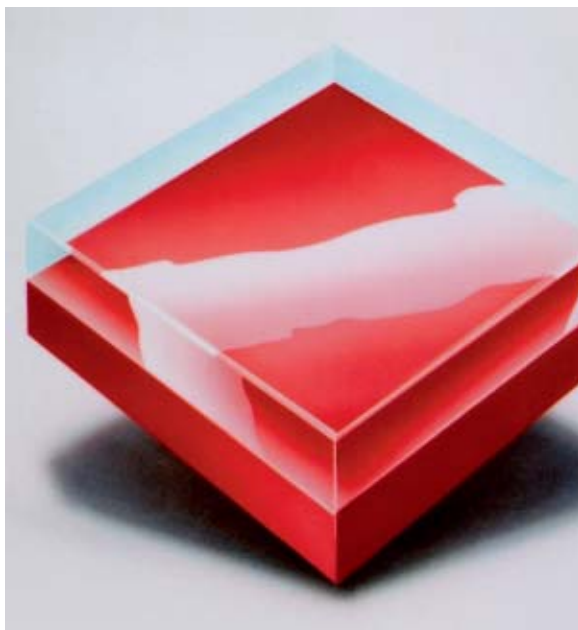
- PERMANENT (sanding paints and clear coat)
- PERMALOID® (nitrocellulose paints)
- HECKOLIN® / HECOLON® (white paint for painters and decorators)
- PLASKIN® (polyester clear coats)
- PRIOMAT® (etch primer)
- PRIOPHOR® (wash primer)

- RADERAL® (polyester putty)
- REAGEN® (epoxy resin paints)
- ROBUSTIK® (acid-curing wood and furniture paints)
- SILBERKRONE® (white paints for painters and decorators)
- MARKIPLAST® (road marking paints)
- TEPPITEX® (floor surfacing compound)
- UNITHERM® (flame retardants)
- VETRODUR® (chemical-resistant stoving enamels)
- VETROPHEN® (synthetic colour pastes and auxiliaries)
- PERMANAL® (alkyd resin paints)
- PERCOTEX® (industrial coating)
- PERMASIN® (leather paints)
- PERMAX® (paint remover)
- CARSIPOL® (car polish)
- FOLIFLEX® (peelable protective and packaging paints)
- PERMATEX® (chlorine rubber paints)
- PERMANAX® (synthetic stoving paints)
- PERMACRYL® / PERMACRON® (acrylic paints)
- PERMASOLID® (high solids paints)

■ Advertisements from the Sixties.

■ 1987: The Spies Hecker COLOR INDEX appeared for the first time.

■ The clear over base system started with two-coat metallic finishes and was later extended to solid colours.



- PERMAHYD® (waterborne paints)
- PERMAFAST® (inexpensive refinishing segment)
- PERMAFLEX® (industrial segment)
- PERMAFLEET® (commercial vehicle segment)

Although the paint industry had embarked on the development of low-solvent, waterborne paints at the end of the 1960s, it took the 1973 oil crisis to sharpen people’s awareness and accelerate research into environment-friendly paint technologies and resource conservation. The Clean Air Code (TA Luft) came into force in 1974 and the results of a study into the causes of summer smog were published in 1975. Within a year, car production in Germany dropped by 22 per cent.

The wonderful world of colour: Spies Hecker colour management.

■ At the end of the 1970s, colour diversity was on the advance. In 1979, the Spies Hecker colour

service was created to meet the growing demand for information on the swelling tide of colours.

In the Eighties, Spies Hecker systematically built up its colour documentation system. The new Spies Hecker COLOR INDEX, at the time a unique system for finding colours, caused a sensation in 1987. The three-volume reference work contained approximately 470 colour cards and over 8,000 car colours from all over the world.

Colour development:

- 1900: Black
- 1912: Black, muted shades of red, blue and green
- 1928: First opaque white
- 1930: First metallic colours
- 1966: 1,500 OEM colours
- 1975: 2,500 OEM colours
- 1979: 8,000 OEM colours
- 1988: 14,000 OEM colours
- 1998: 33,000 OEM colours
- 2008: 46,000 OEM colours



■ 1994: The launch of waterborne PERMAHYD mixing paints was a pioneering step towards solvent-reduced paints.

An ingenious system enabled the refinisher to precisely determine any colour and any shade. Simply for the rendition of these colours, Spies Hecker used 65 tons of paint and 240 tons of paper. Incredibly, if laid side by side, all the colour cards would have covered an area equivalent to about 120 football pitches!

Incidentally, the pages most frequently referred to were undoubtedly those showing metallic colours. Metallic soon became extremely popular, with 50 per cent of all cars newly registered in Germany in 1981 sporting a stylish metallic finish (compared to only 4.8 per cent in 1970) – even though metallic was more expensive than solid colours. The secret probably lies in the multi-dimensionality of these colours. In fact, they aren't really colours in the strictest sense, since they combine colour with effect. The effect is

achieved with microscopic aluminium flakes that act like tiny mirrors, reflecting the light in all directions, making the surface look lighter or darker, depending on the viewing angle.

In 1994, Spies Hecker colour management found fitting expression in the company slogan "Colours unlimited". This was intended to suggest that all efforts in the company were geared to producing vehicle refinishes with spot-on colour rendition. The claim entailed colour precision, colour diversity and colour availability.

The PERMACOLOR mixing system was now standard in virtually all repair shops. The mixing formulas were listed on microfiche, state-of-the-art in its day. These formulas were regularly updated and replaced.

■ The GREENTEC logo on the label shows which products satisfy VOC legislation.

Going green.

■ Environmental sensitivity was on the advance throughout the 1990s and the awareness of solvent-reduced products was increasing. The regulations for refinishers were tightened, and pollutants, as soon as they were identified as such, were substituted in paint formulations. Responding to the demand to reduce the quantities of organic solvents, Spies Hecker launched PERMAHYD (waterborne) and PERMASOLID (high solids) paint materials.

Along with its environmental benefits, the PERMASOLID system brought with it a more efficient and less expensive application method, due to the fact that high solids material requires fewer coats.

The launch of the PERMAHYD Waterborne Base Coat Series 280/285 in autumn 1994 was a milestone in Spies Hecker's product development. The difference between PERMAHYD and conventional paint resins was explained by Dr. Fritz Sadowski in the Spies Hecker Journal in 1995: "The most obvious difference is the purely visual one. Conventional paint resins are soluble in organic solvents. The resultant solution is transparent and doesn't show any scattering of light (the Tyndall effect). Waterborne resin systems (emulsions), on the other hand, are emulsified with water, look cloudy to milky and show a strong Tyndall effect. But this is not the only difference. If you produce a paint film with a conventional resin solution and dry it physically, it is reversible in that it can be re-dissolved in its solvents. Paint films of a resin emulsion act differently. They are not water-soluble. As the base coat dries and the water evaporates, the resin particles cluster more closely together. This yields a dense pack of globules, with only water occupying the spaces in between. When all the water has finally evaporated,



the resin droplets merge together to form a tight, irreversible (i.e. water-insoluble) film. For the quality of the paint film, the degree of fusion is all-important. To support this process, small quantities of organic solvents, so-called co-solvents, are added. Most waterborne base coats therefore still contain up to ten per cent solvent. Despite this, waterborne base coat is a huge step forward in solvent reduction."

This was followed in the mid-1990s by the world's first complete waterborne product line, encompassing everything from primer to clear coat.

In 1998, a high solids surfacer was launched. The solids content was now significantly higher than that of HS surfacers. The marketing department came up with the good idea of issuing an audio cassette labelled "Top Secret" that could be played on car cassette players to explain the new technology to refinishers.

A new logo then emerged for the first time in 2001: GREENTEC – high solids and waterborne products were brought together under this banner. This is a simple, easily recognised symbol indicating that the user complies with the provisions of the European VOC Directive (VOC = Volatile Organic Compounds, considered potentially harmful), which finally came into effect on 1st January 2007. Since then, paint makers have only been allowed to supply water-based and high solid materials.

Incredibly, with the PERMAHYD/PERMASOLID mixing system, it is now possible to produce 46,000 colours. But how will the history of paint development continue in view of the conflicting demands of aesthetics, ecology, economics, technology and globalisation? Eco-efficient systems are on the advance.



For each technology, the protection and long-term preservation of the value of the vehicle will continue to have top priority. At the same time, aesthetics must not be neglected. The desire for individualism will continue to grow. In 2002, Spies Hecker therefore came up with a range of special colours. The Fascination Colors, as they are known, cannot be simply put together in the mixing machine, as they contain special pigments. The colours flop in several dimensions, making it difficult to pin them down precisely. Asian Sun, Arctic Frost and Etna Stream are just three examples.

The radiation curing of paints is a highly ingenious technology. For the painting of objects that cannot be coated effectively with conventional paints owing to their absorbency, high flammability or deformation on exposure to heat, researchers have developed new paints that cure in fractions of a second on exposure to ultraviolet light. Amazingly, if a droplet of UV-curing paint passes a light barrier that triggers a brief photo flash, the droplet doesn't land with a splash but with a click as a solid particle

does. It is cured right through, without a heat chamber, without wasting time and without solvent emissions. UV-curing paints also reduce solvents considerably. In addition, the surfaces are highly resistant to scratches and chemicals. Experts are prophesying a big future for UV paints. In 2004, Spies Hecker launched the first UV-curing primer surfacer under the product name of "Starlight". Putty and clear coat were added to the system in 2007. This opens up an entirely new time dimension for minor paint repairs, otherwise known as "Speed Repair". Nevertheless, paint researchers are already working on new visions for the future, such as nanotechnology.

However things go, you can rely on Spies Hecker to be right there where it matters. Keeping entirely to its motto, "Spies Hecker – simply closer."

■ *PERMAHYD mixing system.*

■ *2002: Launch of Fascination Colors.*

■ *2007: The world's fastest Speed Repair System with UV-curing products and the UV flash lamp for drying.*



www.spieshecker.com